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Textile World

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Facts on Wear and Obsolescence Needed

DISCUSSIONS of equipment depreciation too often resemble debates on prohibition. Conclusions are based on impressions, not on facts.

In considering the obsolescence factor in textile mills, for example, some observers have the impression that the plants in this industry are cemeteries for equipment whose value is largely historical. Such a charge is usually met by the assertion that textile machinery has changed little in the last several decades and that most equipment, if properly maintained, is as good today as when it was first bought.

But nobody knows.

No yardstick has been developed by which the degree of mechanical efficiency of a textile plant may be determined.

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Textile World recognizes the need for definite information along three lines:

1. The methods used by progressive mills for anticipating and deciding upon machinery replacements.
2. The amount of obsolete equipment in the industry. (This involves, first, the establishment of the "yardstick" referred to above.)
3. The extent to which modern equipment will affect savings; and, conversely, the extent to which worn-out or obsolete equipment is a drag on a plant's financial condition.

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Consequently we are conducting a three-stage investigation for the purpose of developing facts in these three directions. Representative mills are assisting us by outlining their policies in planning for and deciding upon machinery replacement. Their reports will be printed in Textile World. The first of these reports begins on page 42 of this issue.

We invite criticisms and suggestions from readers, both now and as this investigation develops in the future. With such cooperation, we believe that this work will be the source of definite, pertinent recommendations to the industry on the question of the handling of the wear and obsolescence problem.

The Week in Textiles

Outlook . . .

THE ADVENT of another month and the passing of a holiday week-end have not quickened the interest of consuming factors in the textile markets generally. . . . . Warm weather has served to stimulate the sale of seasonal goods, but reports indicate staple lines still sluggish. . . . . Drastic curtailment of production in print cloths and narrow sheetings should make itself felt during the next three or four weeks. . . . . Wool goods have been steady, and worsted yarns are more active. . . . . Raw silk experienced further declines and is now at unprecedented low levels. . . . . Knitted outerwear continued firm and there was an increased confidence in rayon market. . . . . Raw cotton prices were slightly lower.

"Speaking of Vacations" . . .

BOAT SAILS and duffle bags, auto awnings and minnow nets, and hundreds of other helpful aids for the vacationer are made, either partly or entirely, of cotton. . . . . Calculated to increase the purchase of cotton products for vacation use is the pamphlet entitled, "Speaking of Vacations," recently issued by the Bureau of Foreign and Domestic Commerce, through its Textile Division. . . . . This compilation of articles containing cotton will undoubtedly help the textile industry to obtain a larger share of the three or four billion dollars spent annually for outdoor vacations in America.

Curtailment in Texas . . .

THE FIRST GAIN in unfilled orders in almost a year was reported by 21 cotton mills in Texas, the figure increasing from 6,688,000 yd. in March to 6,800,000 yd. in April, according to a recent report issued by the Bureau of Business Research, University of Texas. . . . . Many mills in the State are operating only half time, while others are following five-day week schedules, and their consumption of cotton dropped from 6,073 bales in March to 5,889 in April, which was practically 35% less than April, 1929. Cloth sales for the month amounted to 4,580,000, or 87.5% of production.

Converts Sugar into Rayon . . .

AN IMPORTANT chemical discovery which was described at the 13th annual Canadian Chemical Convention, in Ottawa, May 27, may eventually result in the partial displacement of spruce pulp and cotton linters as raw materials for the manufacture of rayon. . . . . Dr. Harold Hibbert, professor of industrial and cellulose chemistry, McGill University, explained to the gathering a method by which sugar from plant life could be transformed into cellulose. An English chemist recently developed a process for making a sugar by mixing carbon dioxide and water, so by combining these discoveries, rayon can be made from gas and water. . . . . Although Dr. Hibbert's paper, which dealt with the biological synthesis of polysaccharides, provoked much discussion, it is still too early to predict the industrial and commercial possibilities of the discovery.

April Wool Consumption . . .

TOTAL QUANTITY of wool going into yarns and fabrics during April, as reported to the Department of Commerce by 440 manufacturers operating nearly 80% of the country's woolen and worsted equipment, was 36,794,262 lb., a decline of about 1% from the March figure of 37,195,057 lb., and about 25% less than the corresponding total for April, 1929. . . . . Of the wool used during April, 52.5% was domestic wool and 47.5% foreign. . . . Number of woolen spindles active during April showed an increase from 59.7% to 60.7%, as compared with the preceding month, but was still far behind the figure of 74.7% for April, 1929. . . . . There was decline in activity of worsted spindles, as compared with March, a drop from 52.6% to 47.7% of the total number.

Rayon Terry Toweling . . .

BY IMPROVED warp-pile control, worked by positively letting off from the pile beam the length required for each loop, Hacking & Co., Ltd., loom-makers, Bury, England, are successfully weaving terry fabrics with a rayon pile, according to a recent report from Manchester. . . . . Courtaulds are said to be watching the developments closely and have supplied all rayon yarn for the experiments so far. The resulting fabric is pleasing in handle and appearance, and it is predicted that it may become an important line in the novelty end of the trade, especially for beach and bath wraps. . . . . The manufacture of toweling with rayon pile has already been undertaken in this country, notably by the Mooresville (N. C.) Cotton Mills.

Favor Mills That Curtail . . .

THE TEXTILE CONVERTERS' Association, in a resolution recently adopted by its board of directors, has recommended that its members and all buyers of gray goods favor the placing of purchases with those mills which are in sympathy with efforts to correct the present unfavorable market conditions through drastic production curtailment, and similarly with mills which have given their endorsement to the 55-50 plan being sponsored by The Cotton-Textile Institute. . . . . Such cooperative action deserves widespread approval in the industry and is another indication of the confidence attached to the 55-50 plan for the stabilization of hours and production in cotton textiles.

Westcott Patent Scrutinized . . .

SOME LIGHT may soon be thrown on the status of the patent recently granted to Westcott Hosiery Mills covering hosiery made from grenadine yarn. . . . . The National Association of Hosiery and Underwear Manufacturers, acting upon the request of Berk-

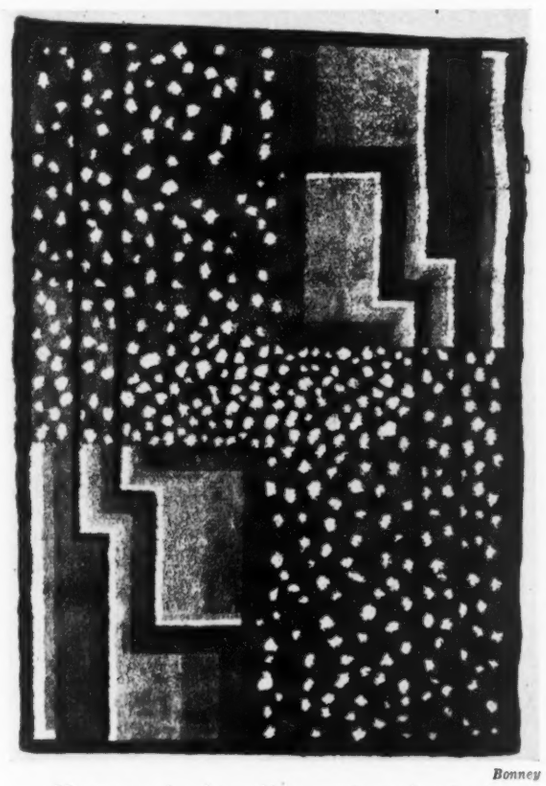
shire Knitting Mills, Reading, Pa., and several other important full-fashioned producers, has employed a patent attorney who will investigate and hand down an opinion on the Westcott patent. . . . .Ten manufacturers of hosiery have already been licensed by the patent holders upon a basis which is reported to include a royalty of 25c. per pair.

Outerwear at Toronto . . .

PRINCIPAL SPEAKERS at annual convention of the National Knitted Outerwear Association June 19-20, at the King Edward Hotel, Toronto, Canada, will include Flint Garrison, director general, Wholesale Dry Goods Institute, who is on the program for the Friday session; Clay Myers, of Joseph Horne & Co., department store, Pittsburgh, Pa., who will speak Thursday; Bernard K. Sandwell, of Montreal; W. H. Rastall, chief of the machinery division, U. S. Department of Commerce, and Dougal McCallum, of R. M. Ballantyne, Ltd. . . . . According to announcement from Ellery B. Gordon, executive secretary of the association, the program will include election of officers, discussion and action on revised trade practice rules, and reports of various committees; while Harold Lhowe, counsel to the association, will act as toastmaster at the annual banquet, Thursday evening.

Business Conditions Survey . . .

SUMMARY OF reports obtained by the National Business Survey Conference on important lines of business and industry, made public by Julius H. Barnes, chairman, indicates that large-scale American industry continues to carry out the construction and other programs forecast last December. . . . . Referring specifically to textiles, the report states that payroll indices for cotton goods in April were about the same as March, 16% under April, 1929, but 8% larger than April, 1928. In silk, payroll indices for April show 5% less than March, 14% less than last April, and 14% under April, 1928. Similar comparisons for wool and worsted goods in April show 6% under March, about 30% under April last year, but only 2% less than April, 1928.



Bonney

Harmony in dots, lines and angles lends interest to the design of this modern rug. It is called "Scala" and is by Dim of Paris

Russian Textile Wages . . .

TEXTILES WORKERS, 675,000 strong, comprise largest single unit of Soviet labor. . . . . Statistics for 11,000,000 workers under social insurance plan show average wage in textile group of $31 per month, as against general average of $36 per month. . . . . Sickness, unemployment, and old age insurance are provided by State as well as free dental, sanitarium and rest-house service.

Senate Passes Research Bill . . .

ENCOUNTERING NO objection on the floor of the Senate, the Merritt Bill under which the Textile Foundation, a Federal corporation, will be created to administer funds for research in textiles, has passed both houses of Congress and is awaiting the President's signature. . . . . Senators LaFollete and Blaine, of Wisconsin, had expressed opposition to the chartering of corporations by the Federal Government, but as the terms of the bill could not be carried out under any other arrangement, no objections were raised. . . . . Definite plans have not been formulated for expending the fund, but it will be administered by a board of directors, consisting of the Secretary of Commerce, the Secretary of Agriculture, and three persons, familiar with the textile industry and its allied branches, to be appointed by the President. . . . Textile Alliance, Inc., has been authorized by U. S. District Court decree to turn over $1,202,457 for transfer to the Textile Foundation when it is organized, and to turn over $248,507 to the Philadelphia Textile School; $124,253 to an endowment fund for research in pure science at Princeton University; and $28,057 to the Massachusetts Institute of Technology.

Cabinet Appointment Anticipated . . .

MORE IMPORTANT than casual speculation on possible successors to James J. Davis, as Secretary of Labor, is the question of whether President Hoover will not use this opportunity to fill the vacancy with a man capable of reorganizing the department for the purpose of inaugurating positive measures toward advancing the welfare of labor. . . . . There is room for well-directed and continuing research in the field of labor, and for further definition of what should be labor's contribution in maintaining both the momentum and equilibrium of production.

Cotton Containers for Foodstuffs . . .

EFFORTS TO develop new uses for cotton are beginning to find large-scale applications for foodstuff wrappers, according to a recent announcement by the Department of Agriculture. . . . . Open mesh bags to hold oranges in lots of one-tenth of a box, and open and close mesh bags to hold 10 and 15 lb. lots of Idaho and Maine potatoes, are going into considerable production for the forthcoming crops.

STAGING THE FIGHT AGAINST

First Article in Series

How American Printing Company Maintains Machinery Efficiency

By Arthur E. Hirst

Superintendent, Print Works Division
American Printing Co., Fall River, Mass.

THREE factors of importance in combating wear and obsolescence are the maintenance and repair of all machinery and equipment, the improvement of existing machines, and the installation of new equipment. With few exceptions the machinery used in textile printing has shown little change in fundamental design for many years, and it is not uncommon to see in daily use, machines that were purchased 25 to 50 years ago. On the other hand, style changes, such as the increased demand for fast colors and the growing popularity of rayon fabrics, have called for refinements to machines already installed and the replacement of old equipment by more modern types.

New Equipment Policy

Since we operate on the budgetary-control system, so far as is feasible, new machinery requirements are anticipated and requisition is made once a year for an appropriation that will cover the expenditure for the ensuing twelve months.

Before purchasing new equipment every effort is made to determine whether the process necessitating the machine is liable to be a standard operation or whether it is occasioned by a temporary fad. It is an unsatisfactory procedure to install equipment suitable only for a special purpose and find that before the machinery pays for itself it has become obsolete from lack of work to keep it running. Ordinarily, print-works machines to be a good investment should pay for themselves within a period of two to three years.

When the decision has been made to purchase equipment for any particular purpose, data are secured from the various machinery manufacturers concerning the types of machines they recommend for this work.

Our engineering department next draws specifications for the equipment and calls for bids from the builders. Meantime the plant superintendent, engineer, and overseer for whose department the equipment is intended obtain all available information as to the comparative merits of the various types of suitable machines. Builder's catalogs, trade papers and particularly visits to other plants doing similar work are among the sources for getting this information. In making the final choice as to the particular machine to be purchased—other factors being equal—the preference of the department foreman is observed. We believe that since the overseer is responsible for the operation of the machine and since he is usually the one most familiar with the details of the process, he should have considerable voice in the selection of the equipment.

Authority for the purchase of machinery is vested in the plant executive and all orders for new machinery must bear his indorsement.

Depreciation Fund

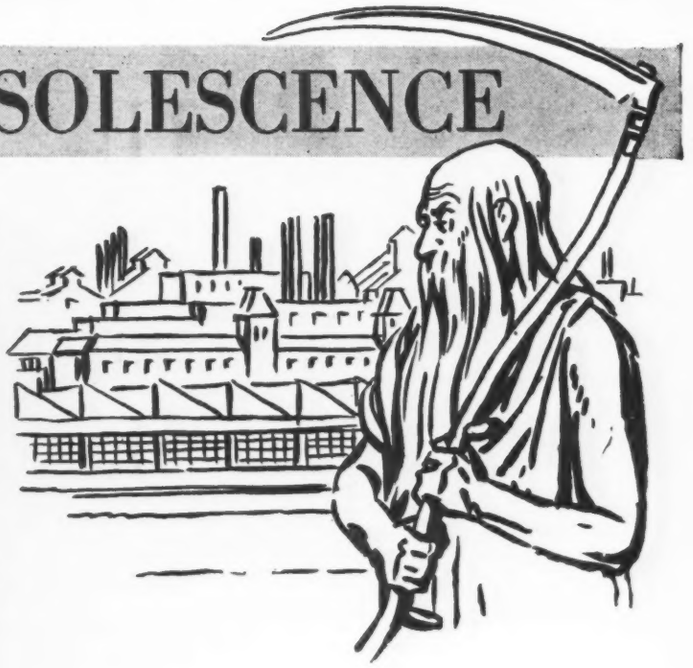
Depreciation of equipment due to wear is a manufacturing expense entering into the cost of operating the plant. To meet this expense a depreciation fund is set aside. The procedure for charging off for depreciation varies in different plants, some mills dividing the cost of the machine by the estimated years of its life to find the yearly charge, while others depreciate more at the beginning and less at the end of the period of usefulness. We favor the simpler method of charging off a fixed percentage each year. The percentage averages at about 5% for machinery aud auxiliary equipment; and incidentally, this approximates the rate that it is expected will be established by the Treasury Department as allowable for use in claiming exemption from federal income taxes.

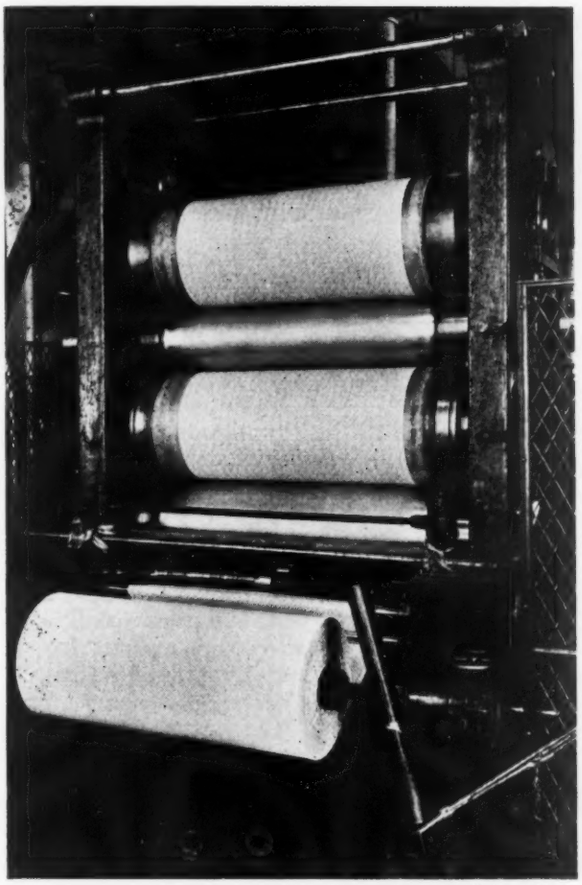
In some branches of the industry—and notably in rayon manufacture—new developments in machinery make it imperative to discard equipment before it is worn out. Where this condition exists, it is customary to set aside a special obsolescence fund. In the print-works division we seldom need this additional insurance and as yet have not found it necessary to create a fund of this type.

Maintenance and Repairs

Overseers and department foremen are responsible for the condition of the processing machines under their jurisdiction; any ordinary repairs, therefore, are made by the mechanical department upon receipt of a requisition

WEAR AND OBSOLESCENCE





Ewing Galloway

Calenders giving cloth its final finish at plant of American Printing Co.

for repairs signed by the overseer. A record is kept by the engineering department showing the costs of all maintenance jobs and allocating these costs by departments.

Responsibility for the upkeep of motors, elevators, and similar equipment is vested in the engineering department. At definite intervals these devices are inspected and oiled by men delegated for that work.

Handling Recommendations

Recommendations for changes, modifications, or improvements entailing any considerable expense are brought to the attention of the superintendent. In cases where it is obvious that the change is needed and can be made by the mechanical department at the minimum expense, this recommendation is approved immediately. In other instances, where it appears that the purchase of new equipment may be more advisable, the engineering department is requested to estimate the cost of making the change as compared with the expense for installation of a new machine to replace or supplement that in question.

This procedure is illustrated by a recent experience. A department foreman requested that a dryer which was not sufficiently wide to accommodate two strands of cloth be widened to meet this requirement. Increased drying capacity was shown to be necessary in his department.

The engineer reported, however, that the cost for labor and material to widen the machine would be approximately twice that for setting up a single-strand dryer for which most of the material was in stock; therefore the first-mentioned machine was left in its original condition and the additional dryer installed.

Improvements to Machines

Improvements to machines already installed include safety devices, refinements to allow improved quality or increased production, and grouping for range drive. The installation of safety devices, together with the appointment of a safety committee has had a noteworthy effect in decreasing the number of accidents. Lost time has been reduced and compensation paid for injuries has been cut to a small fraction of the sum formerly expended for this purpose.

Refinements which have been added recently, include automatic cloth guiders, electric stop motions, improved bearings, and modern cloth pilers for kiers and bins. Increased production in certain departments has necessitated increased machine capacity. Where lack of floor space precluded the installation of additional machines, the use of improved types of equipment has solved the problem. In the mercerizing department, for example, the setting up of a double-tier tenter increased the production of the range and at the same time reduced the labor cost per yard for the operation.

During the last few years arrangement of machinery for in-train or range drive has received careful consideration. Due to the layout of our buildings, it has not been possible to carry this method of machine grouping to the extent that some more modern plants have found feasible. In some instances, however, range drives have proved possible. For washing and drying back grays, and again in a preparing, dyeing, and soaping process, the elimina-

tion of intermediate handling has resulted in marked savings in labor.

Replacement of Equipment

Our decision to process high-quality fabrics, including cotton-rayon mixtures and all-rayon goods, necessitated the installation of apparatus suited for that purpose. To make room for the new equipment no compunction was felt in dismantling and junking a number of indigo-dyeing machines which had not been used for some time and utilizing the space for a fancy dyehouse.

Auxiliary equipment as well as process machines sometimes require replacement if efficiency is to be kept at the peak. Recently increased production in one department resulted in insufficient fabric-transportation facilities. This condition was remedied by removing a slow-speed elevator of single-box capacity and putting in high-speed equipment of double size. This change gave six times the former capacity and eliminated the tie up of work previously encountered.

Employe Cooperation

Two innovations made recently are a suggestion system and a weekly overseers' conference.

Suggestions are written on special cards furnished to the employes; on each card is printed a number; and a stub, which the worker retains, carries the same number. At each exit of the plant there is placed a bulletin board together with a box for receiving the cards. The suggestions are given careful consideration, and identifying numbers of any that are adopted are posted on the bulletin board, so that the persons making the suggestions can present their stubs and receive the cash awards allotted for any ideas that are put into effect. While the majority of the suggestions are not of great interest, several ideas have been received that when developed have been of decided value to the company.

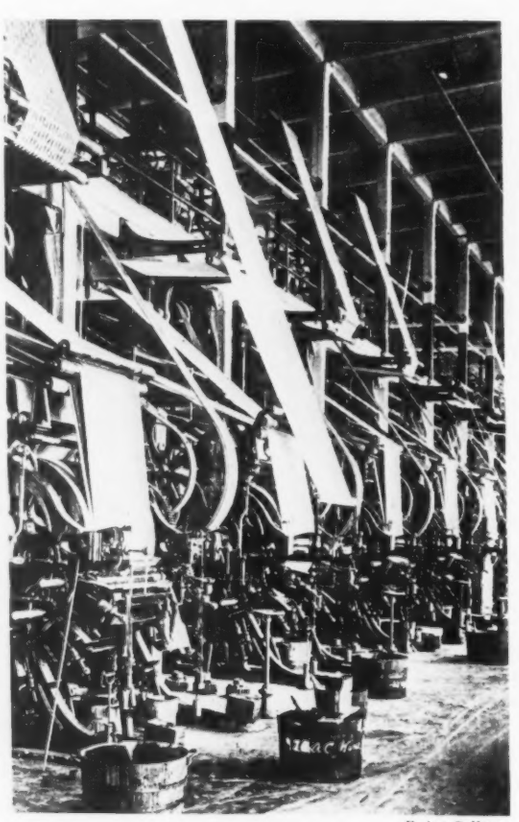
Overseers' Conferences

Of even more benefit have been the weekly overseers' conferences. These informal meetings are attended by the departmental foremen, the master mechanic, chief electrician, chief engineer, assistant plant engineer and boss piper; the superintendent acts as chairman. Improvements made by one foreman in his department are made known to the other overseers at these meetings; causes of seconds and defects and the remedies are discussed; and, more important, by the free interchange of opinions a feeling of fellowship and cooperation is developed.

In recent years much of the secrecy that formerly pervaded the textile industry has disappeared. Executives from other plants frequently visit our mills to see in operation equipment that we have installed or improved, and with few exceptions we have always found them willing to extend the same privileges to us. This type of cooperation reacts to the advantage of the industry as a whole.

A further step—and this is one which may prove of even greater benefit—is the comparison of methods of management, of which the purchase, maintenance, and replacement of equipment is no small part.

". . . Style changes, such as the increased demand for fast colors and the growing popularity of rayon fabrics, have called for refinements to machines already installed and the replacement of old equipment by the more modern types."



Ewing Galloway

A battery of printing machines

WHEN—

Will Cotton Goods Supply Be Balanced With Demand?

By Leavelle McCampbell

Vice-President, Association of Cotton Textile Merchants of New York

WHEN will the ills of overproduction that beset cotton textiles have run their course? When will the supply of cotton cloth be balanced with demand?

A sound answer to these questions supported by such facts and figures as are available should give heart to every textile executive, courage to the bankers who have stood so staunchly by an ailing industry, and should be of more than passing interest to the holders of textile securities.

People must have clothes; the makers of a thousand things must have cloth and inasmuch as no industry can permanently exist without profitable operation by a majority of its members it follows that recovery is certain. Even the most pessimistic must also agree that every increase in cloth consumption and every decrease in the equipment with which cotton mills serve their markets must hasten the date of this recovery.

Fortunately we have at hand rather complete statistics. With regard to consumption these figures are most encouraging. From the standpoint of equipment they point clearly to the conclusion that we are making substantial progress towards normal and healthy conditions.

Production Versus Shipment

For several years the Association of Cotton Textile Merchants has collected and published figures on the production of standard constructions of cloth. These record approximately 40% of the total cloth made and since January, 1928, are from substantially the same groups of mills. The totals presented cover all of 1928, all of 1929 and the first four months of 1930. Potential production is determined by assuming that the greatest output in a single month was maintained throughout the whole twenty-eight-month period under review.

	Yards
Potential production was	9,084,801,000
Actual production was	8,199,506,000
Actual shipments were	8,091,271,000

Had these mills run at peak production they would have over-produced their market to the extent of 12.29%. They actually did over-produce by the narrow margin of 1.34%. The penalty exacted in the shape of price concessions for this infraction of economic law has been out of all proportion to anything gained by such lower costs as were thus obtained. Had these units under-produced by exactly the same margin, buyers would today be on their knees pleading for deliveries and sales forces could be cut in two.

Domestic Consumption

Formerly every five years and lately every two years the Bureau of the Census has collected data on the production of cotton textiles. To determine domestic consumption this has been corrected by adding imports and deducting exports. Figures for 1929 unfortunately will not be available until October. This table, paralleled and corroborated by the record of raw cotton consumption during the same years, shows America's ever increasing demand for cotton cloth:

Year	Cloth Consumed, Yards	Raw Cotton Consumed, Pounds
1899	4,280,959,417	1,793,000,000
1904	4,720,074,364	1,888,000,000
1909	5,960,842,706	2,505,063,682
1914	6,549,334,805	2,666,001,024
1919	5,684,106,139	2,756,117,408
1921	6,258,631,379	2,338,697,216
1923	8,018,669,489	3,186,391,976
1925	7,307,500,310	2,960,453,326
1927	8,478,396,163	3,436,621,630
1929	.....	3,389,529,070

In 1919 the effects of the Great War brought about a decline and in 1925 high-priced cotton again caused a drop. In spite of an occasional ebb, the tide of consumption steadily rises. The average gain for each of the 28 years covered has been 153,122,740 yd.

During this time our population has grown from 76,129,000 in 1899 to 121,600,000 in 1929. Every single year has shown an increase, and if we can judge by the record of the past decade, it is likely that in this way Providence will continue to furnish us with 1,576,400 additional customers every year.

The most interesting thing about these statistics is the relation between population and cloth consumption. In comparing the two we find that in 1899 the average American consumed 57 yd. and that by 1927 this per capita figure had risen to 71 yd.

In the last analysis goods bought are goods consumed although for any single year this is not quite accurate. For instance, prices in 1927 were low and there was a marked tendency to buy ahead of requirements. Possibly it would be fairer to average the census years. These show per capita consumption in 1923 as 72 yd. and in 1925 as 64 yd., which combined with the 1927 figure of 71 yd. gives a six-year average of 69 yd. Either of these methods of determining present per capita consumption effectively silences the contention that changes in fashion and the substitution of artificial fibers are responsible for textile troubles.

Now let us consider the equipment that produces the huge yardage we have been discussing. The total combined spindleage of American cotton mills reached its peak in December, 1924, when the industry could show 37,939,772 spindles in place. During the following year 67,836 of these were taken from position. Since then the decline in this list of available machinery has been continuous and impressive as is shown in the following table:

Dec., 1926	37,364,730	a decline of	507,206 spindles
Dec., 1927	36,465,976	a decline of	898,754 spindles
Dec., 1928	35,267,086	a decline of	1,198,890 spindles
Dec., 1929	34,585,304	a decline of	681,782 spindles
Apl., 1930	34,195,464	a decline of	389,840 spindles
Total			3,676,472 spindles

Therefore for the past four and a third years we have torn down our plant 865,052 spindles or 2.37% per year.

As a matter of fact, demolition has proceeded at even a greater rate than thus indicated for "spindles in place" also includes those that are built each year. Figures on these new spindles are not published but the manufacturers of spinning equipment have very graciously furnished the following five-year record of all

(Continued on page 52)

Severe Textile Operating Conditions Govern Choice of Belting

By William Staniar

Mechanical-Power Engineer, E. I. du Pont de Nemours & Co.

TEXTILE manufacturing consumes comparatively more power-transmitting belting than any other industry because of its severe atmospheric and mechanical operating conditions. Atmospherically this industry subjects power belting to corrosive acid mists and vapors, high temperatures, steam, and moisture. Mechanically it subjects it to high and low speeds, small-diameter pulleys, crossed and quarter-twist drives, binder pulley controls, fixed-idler installations, short-center work, and slipping-belt operations. It is, therefore, reasonable to assume that large quantities of belting are prematurely destroyed and that belting maintenance is excessive—conditions that can only be retarded by a thorough knowledge of the belting materials available. Information as to the relative atmospheric resistant qualities of the various types of belting is not usually at hand; therefore, it is the author's purpose to discuss the attributes and characteristics of certain types of belting employed in the industry mentioned.

Hypothetical cases of power-belting difficulties and their remedies are, to a certain extent, beneficial to the plant engineer; but facts based on experience are more valuable, because they generally fit situations that are causing serious belting difficulties.

A typical example of a branch of the textile industry where power belting is continuously subjected to the action of acid fumes, moisture, high temperatures, and steam is shown in Fig. 1. Conditions such as are represented here demand knowledge of the resistant qualities of belting materials if economy and efficiency are to be maintained.

Acid Conditions

Beltings made from leather, cotton yarns, and fabrics succumb rapidly to the fumes of nitric, sulfuric, and hydrochloric acids unless the leather is protected by special tanning processes and the cotton yarns and fabrics by certain impregnating compounds. Leather belting is used extensively in the textile industry, and the majority of it is the oak-tanned type fabricated with a glue soluble in water. This industry and many others have not as yet come to the full realization that there are tannages of leather on the market that when made into power belting will give much more efficient power transmission and will last decidedly longer when operating in fumes of corrosive acids. The hide of a steer is not leather until it goes through the tanning process, the change being brought about by the action of extracts from the barks of certain woods. The hide is composed of fibers and gelatinous substances. By the action of the tanning extracts the former is toughened and the latter becomes insoluble in water. This results in what is known as oak-tanned leather—a product possessing high tensile strength, elasticity, and durability. This particular tanning process, however, does not protect the leather from acid attack because of the unprotected fibrous structure.

When leather belting of this character is exposed to the vapors or mists of nitric, sulfuric, or hydrochloric acids, oxidation of the fibrous and gelatinous structure immediately sets in and gradually weakens the leather. If contact is made with the actual acid, rapid oxidation or burning is the result. The action of a mixture of nitric and sulfuric acid fumes on an oak-tanned leather belt after twenty days' operation is shown in Fig. 2. The transverse cracking of the leather caused by the action of the acids is plainly visible.

Mineral retanned leather is regular oak-tanned leather treated with chromium salts. This retanning process produces a flexible leather which when made into belting results in a product of higher tensile strength, higher frictional qualities, and greater resistance to the fumes of acids. Therefore the economy of employing this type

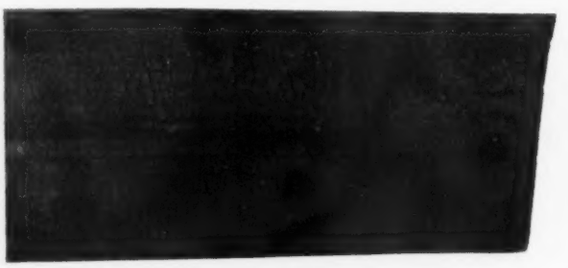


Fig. 2. Oak-tanned leather belting after 20 days' operation in a mixture of nitric and sulfuric acid fumes

Fig. 3. A friction-surface rubber belt after 40 days' operation in the fumes of nitric and sulfuric acids—note also the effect on the wire hook fasteners

of leather belting in acid conditions is obvious. It will not last forever, but it will outlive the oak-tanned type tenfold.

There are two kinds of rubber power belting, namely "friction surface" and "rubber covered." The former is composed of plies of cotton duck frictioned with a rubber compound, while the latter is of similar construction with the exception that the structure is entirely covered with thin rubber. To a certain degree rubber will resist the action of acid, but in a friction-surface rubber belting based on its construction the rubber frictioning compound affords little protection to the outer plies of the cotton duck. Because of this, the effect of nitric, sulfuric, or hydrochloric acids is to deteriorate the cotton rapidly. The rubber friction on the pulling or pulley side of a friction-surface belt is worn off rapidly by slippage and the frictional heat of power transmission, thereby exposing the first ply of cotton duck. Due to deterioration by acid or its fumes, this is soon consumed, exposing the second ply. The destructive action of nitric and sulfuric acid fumes on a friction-surface rubber belt is shown by Fig. 3. It will be noted that the first ply is completely destroyed, and the second is partially gone. The effect on the wire-hook fasteners can also be noted. The rubber covering of a friction-surface belt affords a limited amount of protection against the fumes of weak sulfuric or hydrochloric acids, but none against nitric. Unless the cover is of high grade it wears off rapidly because of excessive slippage promoted by this construction. Slippage is always prevalent with rubber-covered belting; therefore, the cover soon cracks due to burning, allowing the acid fumes to attack the cotton duck. Fig. 4 illustrates the combined action of slippage and acid attack on a belt of this character.

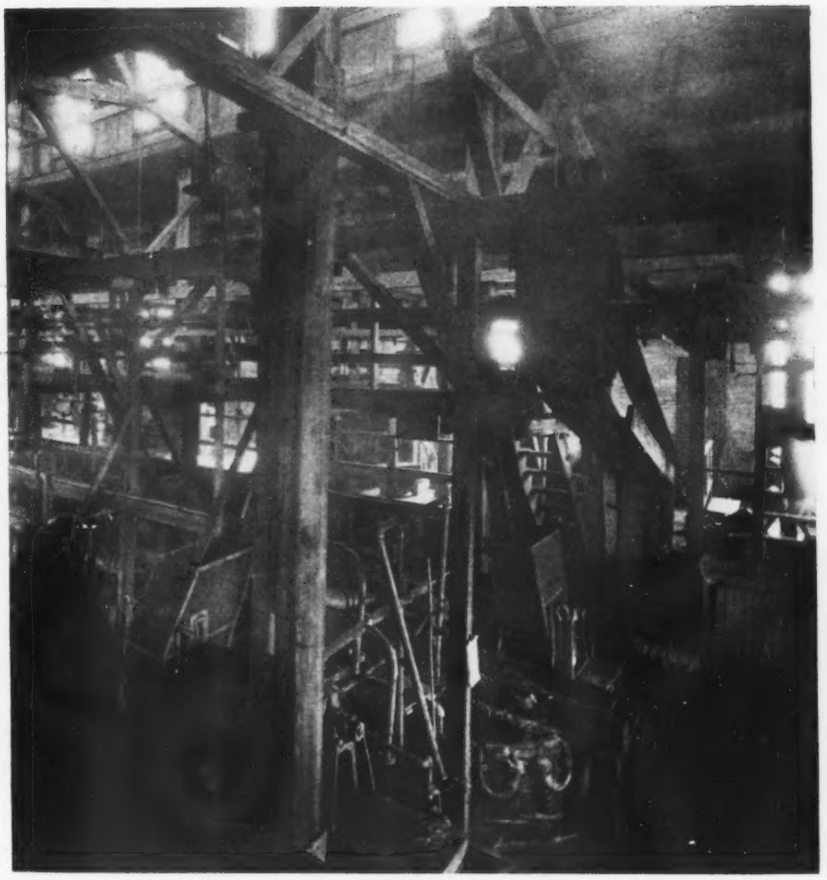


Fig. 1. Typical conditions under which belting must operate in the textile industry

Balata belting is made up of plies of tightly woven cotton duck impregnated with a gum known as "Balata." On account of the impregnation process, which results in the actual covering of the cotton fibers of the duck, this type offers a slight resistance to the fumes of corrosive acids. However, on the pulley side the balata gum wears away quickly from the duck, allowing rapid deterioration of the cotton duck as shown by Fig. 5. Acid attack at the joint of cotton-duck ply belting is always evident, permitting the metallic fasteners to pull out easily.

From the foregoing statements it is obvious that it is poor economy to employ oak-tanned leather, friction-surface rubber, or balata belting in the presence of the fumes or in actual contact with the corrosive acids mentioned. Stitched-canvas and solid-woven cotton belting impregnated with certain compounds are in the same class because of their cotton base.

Mineral-retanned leather and certain types of fabric belting, while not impervious to the action of acid, will give much longer life than the types discussed. A ply-constructed fabric belt of foreign origin after 150 days' operation in periodically dense fumes of nitric and sulfuric acids is shown in Fig. 6. This is exceptional life based on 30 to 40 days' average life of similarly constructed fabric belting. Hair belting, which is a solid-woven mixture of hair yarns and cotton, resists the action of the corrosive acids for long periods or actually until the cotton becomes exposed due to the wearing away of the hair yarns. At this point deterioration sets in rapidly in the form of a breaking down of the cotton binder which allows the hair yarns to separate. Fig. 7 shows a belt of this type after 9 months' operation under the action of dilute nitric and sulfuric acids.

Effect of Moisture

There are some branches of the textile industry where a humid atmosphere is necessary and others where it is impossible to keep power belting from coming in contact with water. Unless the proper type belting is employed, under these conditions the effect is about as disastrous to belting costs, maintenance, and production as the acid effect. The regular process of oak tanning leather does not result in a product impervious to the action of moisture. Furthermore, where such a leather is cut into belting strips and fabricated with a glue soluble in water it is readily apparent that belting of this character will give short life when operating in a moisture laden atmosphere or in actual contact with water. Either condition will cause the leather to become soggy; and due to the solubility of the glue, the plies and laps will separate.

Because of these facts oak-tanned non-waterproof cemented leather belt is rapidly giving way in industrial driving to either the waterproofed oak-tanned leather fabricated with a cement insoluble in water, or to the mineral-retanned leather fabricated with a similar cement. Both types are absolutely water- and moistureproof, and can be operated immersed in water if necessary.

Practically all beltings of the fabric group are claimed

Fig. 4. Effect of slippage and acid attack on rubber-covered cotton-duck belt

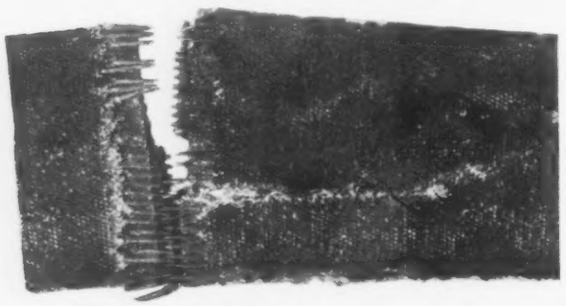


Fig. 5. A balata belt after 45 days' operation in fumes of nitric acid—note effect at the joint

to be water- and moistureproof; but in actual practice friction-surface rubber and balata belting offer the greatest resistance to this element. The better grades of friction surface rubber belting are constructed so that the rubber-friction compound forms, in reality, a honeycomb of rubber around the fibers of the cotton duck: thus, while not protecting the cotton sufficiently against acid attack, it does protect it adequately from the ravages of moisture. However, care should be exercised against holes or cuts in the duck, because this allows moisture to enter and become lodged between the plies, which in time will cause disintegration of the cotton.

Balata belting has also the ability to resist the action of moisture because of the impregnation of the cotton-duck plies with balata, which is a vegetable gum of a nature somewhat similar to gutta percha. Balata gum possesses high waterproofing qualities; therefore, since the individual cotton fibers are covered by the gum, it can be employed in the wettest conditions.

Beltings of the stitched-canvas, solid-woven cotton, and hair types are all moisture-resisting because of the protecting qualities of their impregnating compounds. In excessively wet operating conditions the cheaper grades of these types should not be used.

Temperatures above normal and moist heat caused by steam are detrimental to the economical operation of power belting unless the type that possesses the greatest resistance to these elements is employed. Oak-tanned leather will not resist a temperature higher than 115° F. successfully because of the drying-out effect on the currying ingredients of cod oil and beef tallow. The oak process of tanning results in a hard, rough, and unyielding leather. "Currying" is the term used for stuffing the pores of the skin with internal lubricants to replace those removed by the tanning process. Temperatures above 115° F. also have a softening effect on the glue between the plies and laps. Mineral retanning of leather increases the heat resistance approximately 50%, and the pyroxylin waterproof cement, which is always used in the manufacture of this type of leather, possesses a high resistance to heat. Therefore in temperatures above that mentioned, where leather belting is used, the mineral-retanned type should be employed.

Steam in its condensed state creates an atmosphere of moist heat; as this is destructive to oak-tanned, non-waterproof, cemented leather belting, mineral-retanned or waterproofed-oak types should always be used.

Excessive temperatures have a deteriorating effect on friction-surface rubber belting because of the fact that the friction material employed cannot be pure rubber. All rubber used commercially must be compounded with other materials; therefore when the rubber-friction compound is exposed to high temperatures, a drying out of certain ingredients occurs and ply separation is the result. Condensed steam has little or no effect on this type of belting because the temperature is not high.

Balata belting should not be employed in heat above 110° F. because the impregnating gum melts at this temperature, allowing complete separation of the plies of the belt. This type is not affected by condensed steam, providing the temperature is within the limits stated.

Solid-woven impregnated hair belting can be safely employed in temperatures up to 300° F. because of the heat-resisting qualities of the special hair yarns. It is, therefore, impervious to the action of condensed steam.

Certain types and grades of stitched-canvas and solid-woven cotton beltings may be employed in temperatures as high as 150° F.; but care should be exercised in the use of inferior grades, owing to the possibility of the melting down of the impregnating compounds. Continuous service in an atmosphere of condensed steam tends to make many of these types short lived.

Practically all types and grades of power belting finally succumb to the action of mineral lubricating oil. Its action is slow; but where contact is constant no type of belting has been able to indefinitely resist its deteriorating effect. It rots oak-tanned more quickly than it does mineral-retanned leather. It disintegrates friction-surface rubber and balata belting and washes out eventually the impregnating compounds of stitched-canvas, hair, and solid-woven cotton belting. However, in the textile industry mineral oil is not a serious hazard, because with care, practically all belting can be kept free of it.

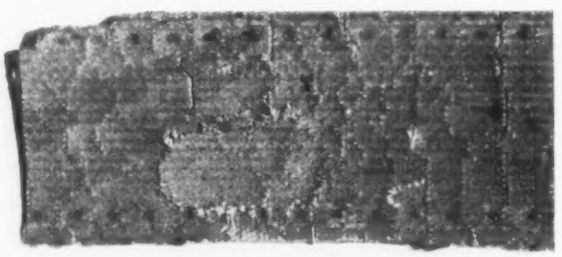


Fig. 6. A ply-constructed belt of foreign manufacture after 150 days' operation in nitric and hydrochloric acid fumes

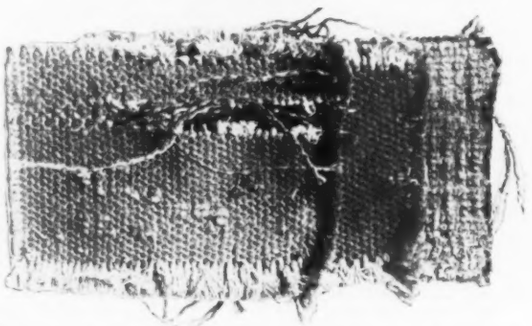
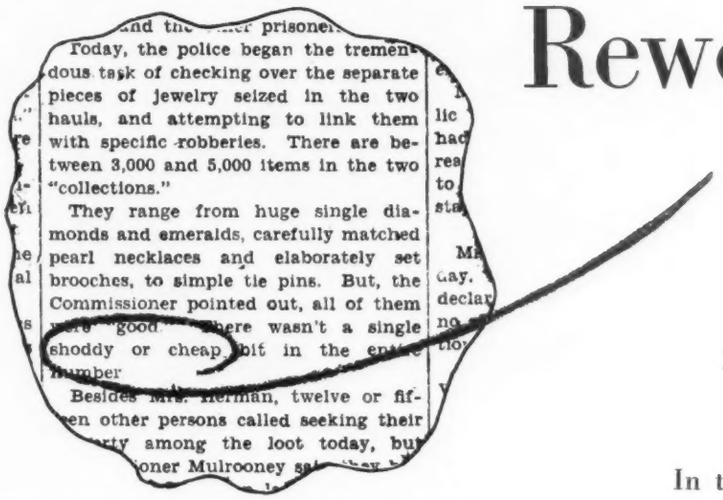


Fig. 7. A solid-woven, hair-and-cotton belt after 270 days', or 9 months', operation in fumes of nitric and sulfuric acids

The Age-Old Prejudice Against Reworked Wool Persists

By J. S. Jacobs

Vice-President, John T. Slack Corp., Springfield, Vt.



Today, the police began the tremendous task of checking over the separate pieces of jewelry seized in the two hauls, and attempting to link them with specific robberies. There are between 3,000 and 5,000 items in the two "collections."

They range from huge single diamonds and emeralds, carefully matched pearl necklaces and elaborately set brooches, to simple tie pins. But, the Commissioner pointed out, all of them ... there wasn't a single shoddy or cheap bit in the ...

Besides Mrs. Herman, twelve or fifteen other persons called seeking their ... among the loot today, but ... Mulrooney ...

The police did not find a single piece of SHODDY jewelry! This clipping from the New York Evening Post *illustrates how a familiar textile term is used to imply inferior quality*

In the accompanying paper, which was read before the Lowell Textile Institute Alumni Association on May 24, woolen manufacturers are urged to adopt a new name for reworked wool and to announce frankly to the public that this material is being used in fabrics of quality. In this way, the author believes, the prejudice of the public against fabrics containing shoddy can be overcome. He also offers worth-while advice to woolen manufacturers along other lines.

EVER since a method of reworking textile materials into fibers was originated, over one hundred years ago, shoddy has been the target of all the abuse that could be conjured up by the interests who feared that its use would in some way injure their own well-being. It has taken the curse of all inferior fabrics, and has been the football in this country for politicians of all parties and classes.

In fact, recent dictionaries include as one of their definitions, "A cloth of inferior quality made of or containing a large proportion of shoddy." Another definition is "Pretentious vulgarity, in society, the arts, and manufactures, etc."; and still another, "Refuse or inferior articles or matter of any kind."

Ignorance of the Public

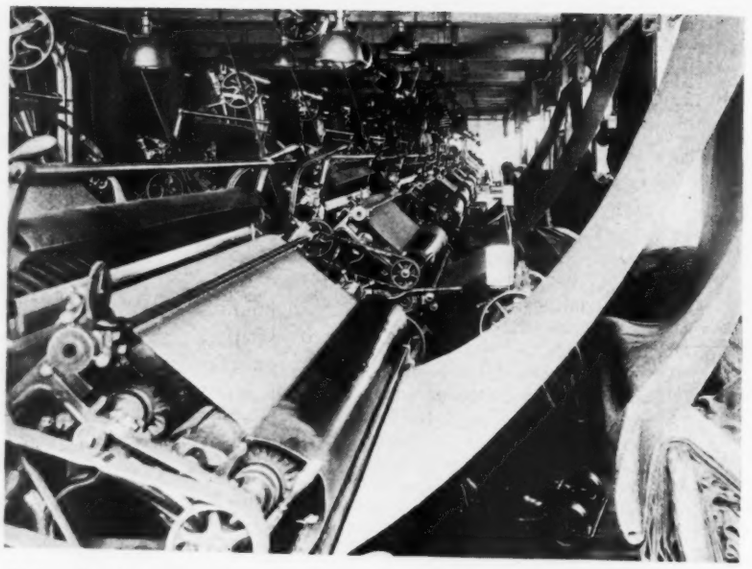
The general public knows absolutely nothing about shoddy. This ignorance is astounding and cannot be realized by anyone who has not heard the common questions regarding it. You would be surprised if you could have seen the interest shown by many people, especially women—who are, after all, the real buyers—at our booth in the recent Boston Textile Show, and if you could have seen their interest and amazement when shown that fabrics of quality could be produced from shoddy. They need only to be shown the true values.

And, furthermore, it is high time that the woolen industry cast aside its present defensive attitude toward the use of reworked fiber, and come out in the open, offering fabrics containing reworked fiber, announcing them as such, and laying stress on their intrinsic value and cheapness. There is no need of covering up the fact that shoddy is there. That is wrong psychology. Don't stand on the defensive, but advertise and demonstrate, and don't expect the retailer and jobber to do it for you. No manufacturer should fight this movement, even if he is at present manufacturing fabrics solely from virgin wool. Who knows when he may himself decide to take on lines using shoddy? Many have been driven to it in the past few years.

It is high time that a new single word of one or two syllables be coined, and it need not necessarily be descriptive, although of course a descriptive word would be preferable. The word "rayon" has been generally adopted, and who ever hears of "artificial silk" today? Why not use some such word as "rewool" or "fibron" or even the word "mungo," which was formerly used to designate the fiber resulting from the reworking of woven fabrics. A word of that kind would seem strange at first, but we would soon get used to it. In my remarks today I am going to use the word "shoddy," because I have used it for so many years that it has become second nature to me.

History of Shoddy Industry

I want to run over briefly the early history of the industry, which may be new to some of you. Apparently the first attempts at reworking manufactured woolen materials into fiber was in England. The first patent on machinery intended for the pulling of rags was in 1801, and the art was kept secret until about 1811, when it commenced to get a little publicity and its use began to spread in that country. The fiber produced from knitted material was at first called "shoddy", and that produced from woven goods, "mungo." The word "extract" was



The finishing machines of many woolen mills are turning out shoddy fabrics of quality

used for many years to define shoddy made from a carbonized material.

During the early half of that century there was a royal decree prohibiting the export of woolen and cotton manufacturing machinery to America. However, in 1831, Richard Ardict smuggled a rag picker made by George Archer out of the country and sent it to New York as a rice-threshing machine. He landed in jail as a result, but was let out after a while upon payment of a fine, and followed his machine to this country. Apparently he started operating in Marlboro, N. Y.

In 1836 George Archer himself decided to follow suit and come over. He brought with him simply a complete set of his drawings, formed the partnership of Archer, Bailey & Ogden, and located in Little Falls, N. Y. Archer built the machinery, and his partners made the shoddy and cloth as well. In 1840 the A. G. Dewey Co. commenced to manufacture shoddy at Quechee, Vt., on a machine invented by Reuben Daniels, of Woodstock. By the way, it has been authenticated that this was an original idea on the part of Daniels and that he had no knowledge of the existence of any machinery for that purpose at the time. Dewey's records show that in 1846-7-8 the concern bought all the soft woolens it could find in Boston, New York, and Philadelphia, paying from 2½c to 3½c a pound. In 1848 James G. Ray of Franklin started manufacturing and using shoddy. From this time on the use of shoddy has extended rapidly.

Mills Have Developed Own Machinery

In the shoddy industry it has been necessary for the manufacturers to develop and perfect their own machinery and processing to quite an extent. The machinery builders have been very slow in making improvements, and have made very few real strides.

Few woolen mills have made any approach to the modern straight-line departmental organization, with department heads working under a budget and supreme in their own departments, following general policies laid out by a board of directors or by the owner, and answering directly to that board or to a general manager. In most plants, the owner or agent tries his best to be purchasing agent, styler, designer, and merchandising manager—and often superintendent as well.

We are all dimly aware of the tremendous strides being made in certain industries in the line of development of organization so as to permit taking advantage of the progress being made *outside* one's own plant in materials, methods, etc., and also to permit of individual research, not only within the plant, but in merchandising methods, etc. The rapidity with which new materials and new machinery which renders obsolete present machinery and methods are being developed today is bewildering.

For example, a new compound has been evolved as a by-product in manufacturing a certain chemical which promises to revolutionize the lubrication of wool and woolen materials preparatory to processing—providing in practice it succeeds in living up to the claims of its manufacturers. There is a method being perfected of shredding and preparing certain grades of woolen-waste material yielding a fiber which when spun into yarn has a greatly increased strength, and in the fabric much greater strength and better fulling qualities than can be had from the same material when handled by the methods common today.

Testing and Experimentation

It is imperative today that every manufacturer provide in his organization for the proper handling of purchases, engineering, and research. The number of personnel and the men and type of equipment necessary for testing and experimentation will vary according to the size of the plant and overhead burden it can assume for this kind of work. But no manufacturer, even if his plant is small, can afford not to have a high-grade man for this purpose. This man's work must not be so cluttered up with other details that he cannot devote the necessary time to the checking and testing of all raw materials of every kind that come into the plant, to insure their being standard and of the best available money value. He must have time for testing and trying out new materials and processes as they come along, and for developing new methods within the plant. It is not necessary to maintain extensive laboratory equipment, as competent agencies can be employed for laboratory work.

One of the points that I am leading up to is that a wide-awake engineering department will oftentimes prove to a manufacturer that materials which have been found at some time in the dim past to be the best for a certain purpose can today be replaced by, or at least blended with, something different, to advantage.

Shoddy manufacturing is an industry that has to depend for most of its raw material on a commodity that is of necessity very variable in its characteristics, even when to the eye it looks similar. And, again, we all know that wool fiber is so sensitive to handling that its qualities are easily injured. The working qualities can be greatly affected by slight changes in methods of manufacture. Furthermore, there are so many kinds of material available today for reworking, and the properties and composition of the same class of material vary so greatly from season to season, that with the endless number of combinations of fibers possible it requires long experience in the handling and blending to produce

desirable stocks and to keep them uniformly close to a standard.

A few things have come to the attention of my concern over the period of our long experience in manufacturing which may be of interest. For instance, some concerns say they cannot use carbonized stock. Sometimes that is justified, but I have known such cases in which it was perfectly feasible to use a proper type of carbonized material and yet secure the necessary working qualities, at a saving in the cost of the batch. Of course the method of carbonizing has something to do with it.

Again, I have in mind that a certain manufacturer not so long ago said he could not use any stripped stock in the particular line which he was making. Yet it developed that by handling this material properly in the stripping, the difficulty could be overcome. A blend containing a certain percentage of this stock proved eminently satisfactory.

I also know two competing manufacturers who are both successful and making similar fabrics in the same price range, and each one declares that the other must be losing money, for he sells too cheaply. Now one of these does not use any old stock in his piece, and therefore is wedded to new clips. The other uses no clips, but is using all old stock. Of course it is easy to say which plan is best.

A few years ago I knew three manufacturers, making competing lines, no two of whom used the same stock nor made their batch in the same way. They were all getting business in competition, even though the competition was very close. Therefore it behooves no one to sit back and think that he has the last word in methods.

The possible savings to be effected by changing one's batch layout are so great that it is well worth while for a manufacturer of woolens to be constantly on the alert for new stock combinations that will work without altering his fabric other than to improve it.

Variations in Working Quality

The variation in the working qualities between different packings of rags, and between different shipments and different bales, is quite surprising, and is quite understandable when one considers that in the case of both old rags and new clips the different pieces were originally manufactured by different mills using differing raw materials and making goods differing in quality. Old rags come back for reworking from two to a good many years after their original manufacture, during which time occur wide changes in the price range, style, and quality of a given line of fabrics.

An example from our own experimental experience may be illuminating. This is an extreme case; yet our many tests have always shown some variation in every class of material. In this particular case, we took two lots of old, coarse, light merino rags. These appeared on casual inspection of the bales to be quite similar. Each lot was blended as thoroughly as possible. Then both lots were processed through the same machines, under as nearly identical conditions as possible. Both were blended with the same percentages of wool and made into an overcoating. They were run on the same card, mule, and loom, were fulled together in the same fulling mill, etc. In lot number one the yarn tested an average of 49% stronger than the yarn made from stock number two; and the cloth, 40% stronger.

We have found also wide variations in the stock that could be produced from different packings of new clips, and in the same clip when made from light- and heavy-weight cuttings, of course. We have always found it necessary to grade the material very carefully. To get an average of larger quantities tends to uniformity also, and with old rags a careful resorting by specially trained sorters is required, which gives quantities of off-sorts of various kinds in order to secure uniformity of the raw material before machining.

Furthermore, there are always materials available in too small quantities to be usable solely by themselves, but they can frequently be had at a figure much below their intrinsic worth, and they can be used as a percentage in a blend, adding necessary working qualities and effecting a saving in the cost of the batch. They can be had in sufficient quantities to permit of uniformity of the blend throughout a season or a year.

It requires long experience and much research and study of fibers to know what can be expected of different classes of stock; and the sorting and regrading and blending mill, when skillfully done, effect great improvements in the quality of the fiber produced.

Supervision and Control

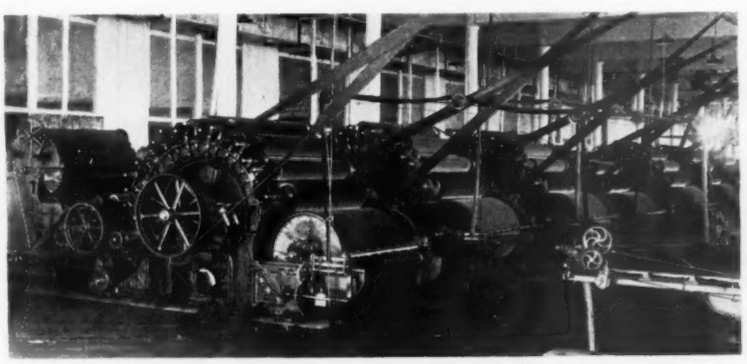
The careful shoddy manufacturer today finds it necessary to maintain a most thorough supervision and control of his raw material from an initial inspection upon its arrival at the plant and through all the various stages of its processing, and it is necessary to carry complete records of each and every lot of material so as to get its complete history and cost. Today, as never before, an accurate knowledge of costs is required, and guesswork has to be eliminated as much as possible.

The item of shrinkages is most important; and carelessness or inaccuracies in handling, grading, and manufacturing, due to the human element, affect the costs widely, and also the quality. A careful and close control is needed. Records, to be valuable as a running control of operations, must be live and available without delay.

Rags come in from all sections of the country. Some districts yield a material that is much higher in quality than others. One district may have a preponderance of well-to-do families, and their cast-off clothing will be of better quality and not worn so much as in the case of other districts.

All packings of rags contain material that it is necessary to throw out, in many cases. It is many times necessary to sort for fineness, color, etc. Worsteds have

(Continued on page 91)



View in card room of modern woolen mill showing breakers

Bradford-Durfee School Graduation

GRADUATION exercises of the Bradford-Durfee Textile School, Fall River, Mass., were held in the assembly room of the school, Thursday evening, May 29. A huge crowd attended, many unable to obtain admission. The exercises were featured by the presentation of diplomas to 32 men of the day classes, five certificates awarded to women graduates, diplomas to 19 evening students and evening school certificates to 254 students. James Sinclair, president of the Board of Trustees, made the address of welcome, Lincoln Baylies, president of the National Association of Cotton Manufacturers presented the medal of the association, and, in the absence of Edmund Cote, the popular principal, Henry W. Nichols presented the Cote prizes and later in the evening the diplomas to the graduating class. The address to graduates was delivered by Rev. William B. Geoghegan of New Bedford, Mass.

N.A.C.M. Medal Awarded

The National Association of Cotton Manufacturers medal, awarded each year to the member of the graduating class who has done the most meritorious work, was presented to John F. Burns, Jr., of Fall River, by Lincoln Baylies, president of the association. Mr. Baylies, in sketching the history of the association's reward, told of its founding by Moses Pierce in 1900. Since then the association has presented eight medals every year.

Francis J. MacDonald was awarded the *Textile Colorist* prize of $100 for maintaining the highest average for the first year course in chemistry and dyeing. Frank E. Singleton, Fall River, received the Cote prize of $20 in gold for the best jacquard designed and woven by a third-year general cotton student, and John R. Marsden, Fall River, was awarded the Cote $15 prize for having had the highest scholarship during the year. Albert Goldstein was also a prize winner.

Seated in a body near the platform were the instructors of the school due to whose efforts Bradford-Durfee is turning out each year well trained young men. Those present included William Marston, E. Talbot and C. N. Alderman, chemistry; L. Schimpf, free hand drawing; J. Crawford and E. Carroll, engineering; H. Smith and W. A. Goss, carding; A. Higgins, designing; W. H. Broomhead, extension work; J. W. Norman, weaving.

The exercises were brought to a close by the singing of the school song which ran in part is follows:

All schools are like a cotton mill,
The fiber enters at the sill,
Transformed by method power, and will,
Thus we our useful course fulfill.
And graduate with textile skill,
Bradford Durfee Textile School.

The room was then cleared for dancing and a good time was enjoyed by the graduates and their friends.

List of Graduates

The following is the list of the day student graduates in general cotton manufacturing:

John Francis Burns, Jr., Charles Richmond Danielson, Samuel James Jamison, Joseph Henry Lemerise, Michael Joseph Nobick, Frank Edmund Singleton and Gordon Morrison Williamson. In chemistry and dyeing diplomas were awarded to Willard B. Chase, Melva Frederick Davis, Lewis Freedman, Israel M. Golden, William Hanson Horton, Louis Lipschitz, Patrick Charles Murphy, Harry S. Posnak, Philip Swartz, Earle Henry Tuttle, Harry E. Woolfe, Arthur C. Wood and George Lambert Wyatt. In the engineering course the following graduated: Joseph Bean, William W. Davis, Jr., Frederick D. Dewsnap, Richard E. Hennessey, Michael K. Katz, Gerard M. Kelly, William F. McHugh, Gordon H. Spooner, Harold E. Taylor, Allen F. Terry, Wilfred Vaudreuil, and Frank E. Ware. In certificate courses the following women graduated in free hand drawing and painting: Gladys Louise Johnson, Ruth Constance Malvey, Evelyn Jeanette Paquette and Fanny Smith. For fashion and costume illustration, certificate was awarded to Mary Louise Fahey.

When Will Demand and Supply Balance?

(Continued from page 45)

they have installed in American mills including new building, additions and replacements.

1925	343,292 spindles	1928	255,912 spindles
1926	217,264 spindles	1929	320,784 spindles
1927	496,192 spindles	Average	326,688 spindles

This indicates that about 1,200,000 spindles are really finding their way to the scrap heap annually. If we divide this figure into the number of spindles now in place it establishes in a rather practical way that the business life of an American spindle is almost exactly thirty years.

If we take the current rate of 326,688 new spindles a year and assume that not a single spindle is added to the number we have it will require something over a hundred years to reconstruct our present plant. Surely this is a most inadequate program of renewal and one which cannot continue without greatly accelerating the passing of machinery now in place.

So much for the plant. Let us see how much of it has been and is actually in operation. Of this the Bureau of the Census also furnishes quite a complete record.

In 1900 there were 19,472,232 active spindles. By 1910 there were 28,266,862 or nearly 9,000,000 more. That decade was the heyday of mill building and mills constructed during that period still form the backbone af cotton textile production. We have seen, however, that the practical business life of a spindle is thirty years. Therefore this large section of equipment is nearing the end of its usefulness. This is another factor pointing to a more rapid decrease in spindles in place.

After 1909 building continued at a slower rate but 1923 saw 36,260,001 spindles in operation. That was the peak and really marked the beginning of over-production. Since then, for seven straight years there has been a decline. The record runs as follows:

1924	35,849,338	a decrease of	410,993
1925	35,032,246	a decrease of	817,092
1926	34,750,266	a decrease of	281,980
1927	34,409,910	a decrease of	340,356
1928	33,569,792	a decrease of	840,118
1929	32,417,036	a decrease of	1,152,756

The increase in average running time, brought about chiefly by the change from day time operation to day and night operation, is however a major factor and looms large upon the horizon. There are those who feel that the whose solution of the problem of over-production lies in checking and possibly stopping this development entirely. It is attacked on moral grounds. Legislation to prohibit the employment of women and minors at night is threatened. But the hard-boiled fact remains that the mill running day and night can produce cotton cloth at lower cost than the mill running daytime only.

Since the cotton fiscal year ending July 31, 1922, the Bureau of the Census has collected this data showing the aggregate running time in terms of spindle hours.

1922	89,308,613,876	1926	93,941,080,761
1923	101,931,101,448	1927	102,605,403,478
1924	84,359,693,047	1928	96,451,049,937
1925	91,054,615,317	1929	99,604,009,191

These figures on spindle hours offer a method of measuring the extent of double shift operation. By comparing them with the number of active spindles we learn that the running time in hours per active spindle in recent years has been as follows:

1922	2,501 hours	1926	2,703 hours
1923	2,811 hours	1927	2,892 hours
1924	2,353 hours	1928	2,873 hours
1925	2,594 hours	1929	3,073 hours

The Lines Must Cross

It is not conceivable that we can take care of increasing consumption and at the same time progressively destroy the equipment with which we make our goods. Somewhere these lines must cross. Somtime there must come an end. When it does there is likely to a be a textile boom greater than any we have known for it will find us with a plant gone beyond the possibility of quick rehabilitation.

There must be this logical sequence: first, a return to profitable operation; second, the maintenance of earnings for some reasonable period; third, the recovery of cotton mill securities to a level based on something approaching replacement costs. These must precede any extensive building program.

New Fabrics at Philadelphia Graduation

GRADUATION exercises and an exhibition of fabrics manufactured by students marked the closing of the forty-sixth year of the Philadelphia Textile School, June 5. Regular course of study in the day school was completed by 17 students, all of whom received diplomas; eight received diplomas as graduates of the chemistry, dyeing and printing course in day school, while six received certificates for successfully completing day course. Graduates of the evening school received certificates for completing various courses.

Graduates and friends gathered in one of the largest class rooms of the school and listened to an address by Director France in which he gave them a final message before leaving and entering the business world. Diplomas were presented by J. Stogdell Stokes, vice-president of the Pennsylvania Museum's School of Industrial Art.

Emphasis has within the last five years been placed upon examples of the work produced by students rather than upon formal exercises and for this reason the display in the school of a complete line of fabrics manufactured, attracted attention not only because of their beauty but because all steps from the raw material to the finished fabric had been conducted by the students.

The outstanding feature of work displayed was the Jacquard weaving section where light-weight worsted fabrics to be used in women's suits and dresses were on exhibition. A number of buyers from Philadelphia department stores were present and expressed themselves as astonished at the line shown. Fabrics weighing less than 5 oz. per yard were shown in the brightest and most attractively designed patterns. Several of the materials were composed of 2-78s French spun worsted yarns, used with 60s filling.

TEXTILE WORLD prize, awarded to student of third year chemistry dyeing and printing class attaining the highest rating for the year's work, was won by Anton Sobocinski, Jr. Allison Daniel Fisher won the TEXTILE WORLD prize presented to students of evening chemistry and dyeing attaining the highest rating for the full three year course.

Diplomas and certificates were presented as follows:

Diplomas Awarded

Regular Textile Course—David Aboff, Thomas Hollingsworth Andrews, 3rd, Albin Anton Bschorr, William Devitt, Jr., George Thomas Downs, Jr., Nelson Kershaw Fite, Hugh Sydney Harpole, Fred Herman Heinrich, Henry Jacob Hillman, Walter Waldemar Humecky, Jacob Jarmak, Frederick Louis Knecht, Fred Bonar Lewis, William John Lotz, Louis Semel, George Powell Shirer and Harry Ferdinand Smith, Jr.

Chemistry, Dyeing and Printing Course—Chester Edwin Blood, Herbert Carlton Everts, Kenneth Watts McKenzie, Victor Joseph Orlandi, Anton Sobocinski, Jr., Herman Henry Stiegler, William Flaccus Stifel and George Wiseman.

Full-Course Certificates—Day Classes

Cotton Course (Two Years)—Reuben Herzfeld and Ernest Guy Scotten, Jr.

Silk Course (Two Years)—Alfred A. DiCenso and George Henry Klingberg.

Figured Design Course (Two Years)—Harry Joseph Hardacre.

Wool and Worsted Course (Two Years)—Ferdinand Stephen Kaiser.

Full Course Certificates—Evening Classes

Regular Textile Course—(Three Years)—Oliver Leo McCurdy, Harry J. Smith, Thomas Russell Thorpe and Elsie Marie Wacker.

Chemistry and Dyeing Course (Three Years)—Frank Pearson Bartolett, Edwin Swope Craig, Robert William Delaney, Allison Daniel Fisher, Herman Hardwick, William Francis Harper, Cecil Law, Paul John Miller, John Joseph Mitchell, John George Nemeth, Harry Porter and Robert Schaeffer.

Chemistry Course (Three Years)—Bernard McQue.

Partial Course Certificates—Evening Classes

Weave Formation (Three Years)—Edwin Harrison Clark, Joseph P. Dawgiewicz, Martin Joseph Lauber, William Hellings Smith, Fletcher D. Street and Thomas Tinney.

Fabric Analysis and Calculations (Three Years)—Joseph P. Dawgiewicz, Walter W. Ferrell, Martin Joseph Lauber, John George Mountain, Fletcher D. Street, and Thomas Tinney.

Figured Design (Two Years)—Bernard Russell Koenig, Martin Joseph Lauber, John Stead McConaghy, Clayton R. Struse, Jr. and J. Clark Swartley.

Worsted Yarn Manufacture (One Year)—Rodney Ingram Coe, Alfred Cramer, III, Walter Hupfeld deMets and Lester Oppenheimer.

Raw Materials of the Wool Industry (One Year)—Joseph P. Dawgiewicz.

Silk Fabric Analysis (One Year)—Charles William Grobel, Benjamin Hoffman, Nicholas Miccaelli, John Earl Miller, Karl James Mergenthaler, Paul Keith Simpan, William A. Stewart and Wilburt Salus.

DYEHOUSE FLOORS

By Fred Grove-Palmer, A.I.C.

THE problem of getting rid of the waste water from the dye becks as cleanly and as expeditiously as possible is one which frequently presents itself. There is often a tendency for the water to lie around in unseemly pools and puddles. These not only detract from the general appearance of the dyehouse, but are apt to cause spots and stains on the work as it is moved from one place to another.

In planning the dyehouse floor, it has to be remembered that the waste water must be got rid of as quickly as possible; there is not time to permit it to flow gently out of the kettle. To do so might cause an alteration in the color of the fabric because the fiber would have an opportunity to absorb the small quantity of dyestuff left in the liquor. In any case, the beck is needed for the rinsing or for the next batch, and there are never so many becks that one can be spared indefinitely while the water slowly trickles down the drain. Consequently, the plug is withdrawn and the water rushes out. If the floor is not properly constructed to cope with such flooding, when two or three tanks are emptied at the same time, the room is covered ankle deep with waste liquor.

The simplest plan for disposing of waste water is to have it run into open troughs or canals which traverse the floor of the dyehouse.

Construction of Channels

These troughs are sometimes made of hardwood, of concrete, or of blue brick; but none of these materials is really satisfactory. For general efficiency and moderate cost it will be difficult to beat acid-proof pottery channels with pitch joints, laid on pitch in a bed of concrete. These channels are covered in with cast-iron diamond gratings. The gratings are inexpensive and last a long time, provided they are not thrown around during cleaning. Because of their brittleness, however, they are apt to break; and in consequence, a supply of new ones should always be available.

Whatever material is used for making the gutters, it will require maintenance in perfect condition if it is to give satisfaction; and on this account there should be an official inspection of the floors every week, and all necessary repairs should be carried out at the earliest possible moment. The objections to the various kinds of channel named above are as follows: Wood, even if well pitched, does not stand up to the work indefinitely, and when it once begins to give way the whole system requires renewal. Concrete has much the same fault as wood, since after a time the continual flow of hot water and dilute acid causes it to get soft and crumbly; patching it is never really effective for long. The blue-brick channels will last well enough, but usually they are not made sufficiently deep for the purpose. The earthenware channels have none of these objections; and if one of them happens to get broken, it is only necessary to remove it and slip in a new one without in any way disturbing the rest.

Materials for Floors

As regards the main part of the floor there is some choice of materials. Concrete is often used, but to some extent it is open to the same objections as have been raised in connection with its use for the drains. Diamond-surfaced blue bricks are commonly employed, and make a satisfactory floor that lasts indefinitely and can be repaired piecemeal when required. The chief fault is that this type of floor is very noisy.

We have used asphalt on occasion and this has proved to be very satisfactory; it is clean and quiet; and, given a good foundation, it lasts a long time without showing any signs of wear. Asphalt should be laid by expert workmen whose foreman should be supplied with a blueprint of the desired slopes and curves. Hot water and

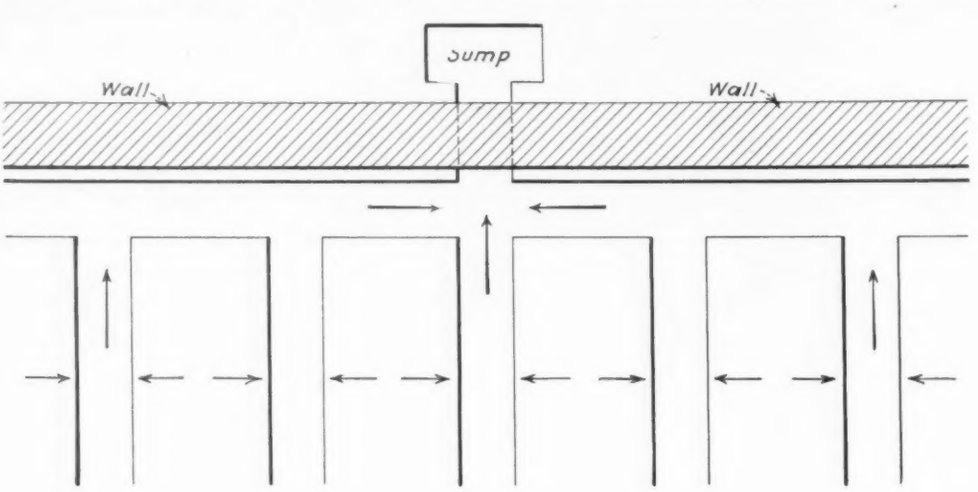


Fig. 1. Drain System for Dyehouse Floors

CONDITIONS in the dyehouse necessitate a different type of floor construction from that required in other textile buildings. The author discusses the various materials used for dyehouse floors and drains, and describes layouts which allow quick disposal of waste liquors from the dyeing machines.

dilute acids have no effect on asphalt, and even in very hot weather there is no appreciable softening. We found that in one mill where the operatives were constantly dropping sharp-edged containers they gradually produced dents and marks, but these were entirely removed by treating the injured surface with a heavy hot iron specially made for the purpose. After that, a bumping mat was put in that spot to take the jar of the descending canisters.

There are on the market a number of excellent composition floorings suitable for dyehouse purposes. In selecting a composition flooring it is important to secure one with nonslip properties when damp.

Layout of Drains

As regards the layout of the drain system, opinions vary as to the best method to adopt. In practice they can be boiled down to three main varieties, which are those here pictured. There is not a lot to choose between them; all are effective; and the decision must rest upon the positions occupied by the various tanks and vats.

The layout shown in Fig. 1 entails the most skill in getting the slopes of the floor just right. The sump of the main drain is placed outside the building. On the inside of the wall of the building and close to it is the main channel of the dyehouse, into which, at the requisite intervals, run the channels. Between each of these channels the floor is curved like the camber of a well-made road to enable the water to flow into either side. The floor as a whole has a general plane of incline towards the main gutter which empties into the sump. In the sketch the arrows indicate the directions of slopes.

A somewhat simpler system, in which there is a main channel running down the center of the floor to the sump is shown in Fig. 2. This channel is fed at right angles by subsidiary channels, the first of which is under the wall. The inclination of the floor in this case will be both towards the sump and towards the center channel.

In the example shown in Fig. 3, which has been called the herringbone system on account of its shape, there is once more the main gutter running down the center, with the smaller one under the wall. The floor itself is cleared by tributary channels which join the principal run at an angle. In the sketch this is put at around 60 deg., but the angle will depend upon the shape of the building and the arrangement of the plant. Except for a slight fall towards the center in the case of the first channel at the foot of the wall, there is only one general slope of the floor required with this drain plan. This arrangement simplifies the laying of the floor, and for this reason, other things being equal, the herringbone system has much to recommend it.

Perforated Baffles

Dyehouses dealing with loose materials are very often troubled by the choking up of the drains. This leads to flooding of the floor even when, under normal circumstances, the guttering is amply large enough to carry off the waste water. The flooding is prevented by inserting a perforated baffle, usually an iron plate, at the junction with the main channel. If the plate is made about one-half or two-thirds the depth of the runway, it is sufficient to collect the heavy matter and still allow the water to flow over the top when the baffle becomes clogged. Solids of a lighter nature, such as do not sink to the bottom during the rush of water, are stopped just before they flow through the culvert in the wall by placing two baffles quite close together with another between them that is suspended and does not reach to the bottom of the channel.

The designers of some dyehouses object to the open-drain system, preferring to lay drainpipes under the floor

(Continued on page 91)

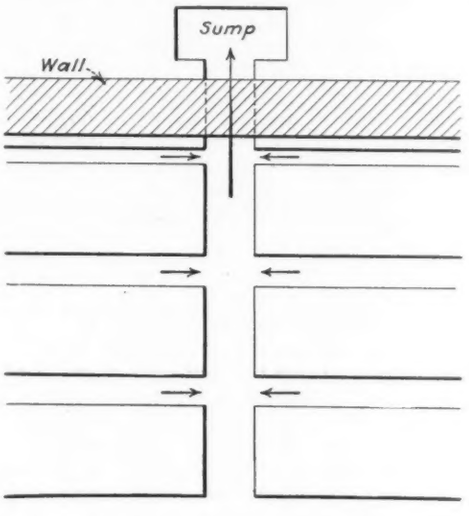


Fig. 2. Layout of Simple Drain System

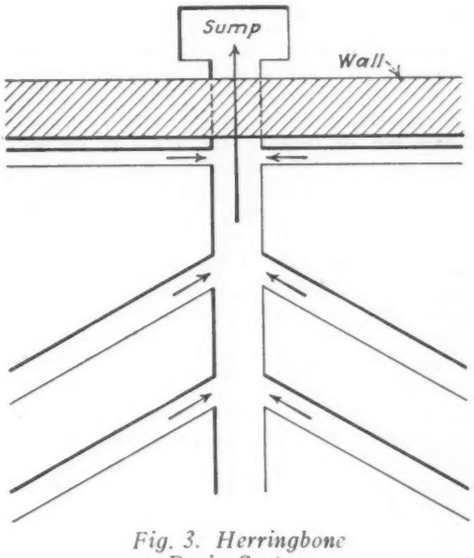


Fig. 3. Herringbone Drain System

OVERSEERS' ROUND-TABLE

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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The Question of

"I WAS talking the other day with a man from another industry," Superintendent Chase settled in his chair and glanced around the overseers' meeting, "and he told me of the success they have had with regular rest periods during the working day. I know that the plan has been used to some extent in our industry, but, frankly, I don't know a great deal about the results and I'd like the opinion of you men."

"I have never been in a plant where the plan was in operation," Pete spoke up, "but I understand that the results have been quite good. My own opinion is that rest periods, of say ten minutes every two hours, would increase production. The workers would not be allowed to work during these periods and I believe the change, and the actual rest, would so pep up the help that enough would be added to production to more than make up for the rest period."

"I'm afraid I disagree with Pete," Bill said, "because I think such a system would make the workers think they were in an army. Everyone likes to go along at their own rate and sort of take a rest for a few minutes when they feel like it. I don't think the workers would like it.

Methods of Reporting Carelessness Outside One's Own Department

Editor, Overseers' Round-Table:

THERE IS nothing more detrimental to any business than carelessness. It is practically the cause of all the troubles we have. Any organization can't be too severe in the elimination of every form of carelessness.

To accomplish this, it takes the cooperation of the entire organization. I think when the superintendent sees carelessness on the part of any employe, he should immediately report it to the overseer in charge of the department. Or, if an overseer should see carelessness by an employe, in a department other than that he has charge of, he should report it to the proper overseer.

When analyzed, I think you will find 100% of all our troubles are caused by the carelessness of someone. Why not use every precaution to stop carelessness?

JAMES L. TURNER,
Dominion Fabrics, Ltd.

Editor, Overseers' Round-Table:

TO MY mind, there should be no question of what to do in noticing carelessness. First, we should bear in mind we are the representatives of the company, and all heads of departments should have the best interests of the company at heart.

If the superintendent or overseer or assistant be going through the mill and see a hand doing anything that would cause bad work or seconds, it would be his duty to tell the foreman or overseer of that particular department. I think the clear-thinking broad-minded man would thank another for telling him. If, however, the carelessness was of a very serious nature, and the hand needed correcting it should be done then and there by the person seeing it first, let it be superintendent or overseer from another department or who it may. I appreciate working with men of the latter type.

"A SOUTHERNER"

Editor, Overseers' Round-Table:

THERE IS not an overseer anywhere who will not see carelessness quicker in the other fellow's department than in his own.

An overseer or super should never bawl out an employe in the other fellow's department, unless the employe is doing something that would endanger himself or a fellow worker, cause a bad smash, or is deliberately wasting stock.

I think it would work out better for all concerned if, when the super noticed carelessness on the part of an employe, he went directly to the overseer. Then it is squarely up to the overseer and he is the man the company holds responsible. Should the super check up the employe the overseer is likely to slacken up, and an otherwise good executive is spoiled. I think that if the other overseers are keeping their own departments as near 100% efficient as possible they have no time to interfere with the other fellow's business.

A good overseer is naturally proud of his department. He will "coach" his help, not drive them. He will be of a temperament that will welcome a friendly suggestion, but naturally he will resent interference on the part of others in his department. And, gentlemen, if I were a mill agent I would not keep an overseer who would stand for it.

W. G. TUER,
Boss Weaver

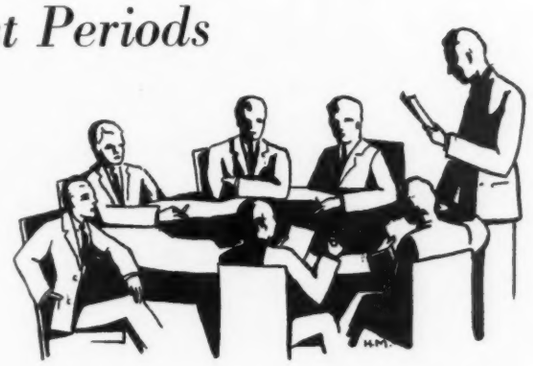
Editor, Overseers' Round-Table:

CARELESSNESS SHOULD be brought to the worker's attention immediately by the mill man or super and explanations and instructions given in a pleasant way, regardless of the overseer.

By the time carelessness, no matter how trifling, was reported to the overseer, damages and injuries could occur. Some overseers have large departments and it would take time to find them.

An overseer should be tickled pink to have someone check carelessness in his department for it is liable to occur in

Rest Periods



Many of the men remember the old army order of rest ten minutes and hike fifty and," Bill grinned, "I don't think they have many pleasant memories of army routine."

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Do *you* think definite rest periods would raise the workers' morale and increase efficiency?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

any department. The workers would also feel that the super took an interest in their welfare.

Some overseers, when they have been informed of a little carelessness, let it slide, which is a big mistake. They should be careful themselves at all times for careless overseers have careless workers.

JOHN PICONI,
Supt. Heck Silk Co.

Placing Responsibility for Machinery Upkeep and Repair

Editor, Overseers' Round-Table:

BY ALL means hold the overseer responsible for the condition of machinery in his department as he is, or should be, for any or every other condition, but give him every facility to perform such a duty.

If he has his second and third hands, fixers, etc., rightly trained he should know the condition of every machine in his department and know just what wants to be done and when, much better than the mechanical department, for they do not know the intricacies of the machines as the overseer does.

I think it a very good idea to allow each overseer his own machinist if the plant is sufficiently large. He then knows his man and his abilities, can call on him at once, and then there should be no excuse for imperfect conditions.

The location of the mill is a factor which effects this question considerably. The majority of the mills in England do not have any machine shop at all as they are so close to the machinery makers one may get any part for renewal in the space of one or two hours, but in this country where many mills are thousands of miles from the machinery makers, a machine shop with good mechanics is essential. Nevertheless, in my opinion, the overseer is the man who should be responsible for the working condition of his machinery for, if he isn't, he cannot be held responsible for the work turned out.

A. COOPER

Editor, Overseers' Round-Table:

I AGREE with Bill; an overseer should have full responsibility for the upkeep and repairs of machinery under his care.

The overseer, knowing the ins and outs of his machines, can usually carry out small repairs much more quickly than a machinist. Major repairs should be carried out under the overseer's supervision. Many repairs can be efficiently carried out only by an experienced overseer. An overseer of mule spinning must be right on the job if he is interested in good-running mules and an overseer of carding should be particularly interested in his machinery and mend his own card clothing.

An overseer who knows his job and can plan work ahead can readily strictly supervise all repairs and upkeep in addition to performing his regular duties efficiently.

My experience has taught me that a machinist does not take the same interest in a machine as an overseer.

M. L. DYSON

Editor, Overseers' Round-Table:

THE QUESTION of concentrating the oiling into one department, in my opinion, is one that can be solved only by the individual mill.

On the one hand you have the fact that the overseer is responsible for all machinery in his room and, if a fire starts or a breakdown occurs, it is not the mechanical department which suffers, but the overseer, since it affects his costs and production.

On the other hand if the oiling were given to a special department it would be a load off the overseer's mind. In this case, of course, all responsibility for fires, etc., should rest on this oiling department and there should be no buck-passing.

I rather think the overseer should have charge of all oiling, but the question can be decided satisfactorily only by a get-together of the mechanical department and the overseers.

S. H. SMALL

Summary of Discussion On Written vs. Verbal Orders

MAJORITY opinion expressed in the contributions favored written orders as a protection to both the superintendent and the overseer. It was felt, however, that the written orders should not go into too many details, but, in general, should merely set forth the results required, leaving the actual working out of the problem to the overseer. One of the points stressed was that much depended on the type of superintendent and overseer; some mills functioning properly with verbal orders alone, while written orders were essential in other mills.

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NEWS about MEN

PHILIP B. WELD, of Post & Flagg, was elected president of the New York Cotton Exchange June 3, to succeed GARDINER H. MILLER, who is now completing his second term. WILLIAM S. DOWDELL, who is with Weil Bros., was elected vice-president to succeed Mr. Weld, and T. LURELLE GUILD was re-elected treasurer.

ARTHUR W. SHUTTLEWORTH has been elected president of the Mohawk Carpet Mills, Amsterdam, N. Y., succeeding his father, H. L. SHUTTLEWORTH. Directors elected at the annual meeting included J. S. BAKER, H. E. DENNISON, W. A. SIMONSON, J. W. PRENTISS, H. L. SHUTTLEWORTH and G. A. MCNEIR.

JOHN A. MCGREGOR, president of the Utica (N. Y.) Steam & Mohawk Valley Cotton Mills, has been elected a director of the Utica Mutual Insurance Co., according to John L. Train, general manager of the insurance company. Mr. McGregor is a former director of the Chamber of Commerce of Utica.

H. W. BENNETT, president of the Bennett Textile Co., Inc., Cohoes, N. Y., was chosen treasurer of the Y.M.C.A. in that city at the annual organization meeting.

THOMAS A. CRIMMINS, president of the Crimmins & Pierce Co., Boston, wool merchants, returned to England last week to join and return with Mrs. Crimmins, who has been visiting their son and his family.

JOHN BARNES, president of the Blood Knitting Co., Amsterdam, N. Y., was elected a director of the F. J. & G. Railroad at the annual organization meeting.

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E. G. ROBINSON, president of the Pacific Coast Linen Mills, Vancouver, Wash., states that he expects THOMAS D. BOWMAN, American consul-general at Belfast, Ireland, who has become particularly interested in the flax industry, to arrive in Portland early this month. Mr. Robinson became acquainted with Mr. Bowman on his recent trip to Ireland, and through the efforts of the Department of Commerce, the chamber of commerce and Mr. Robinson, the State department is sending Mr. Bowman across the continent from Washington, D. C., in the interest of the flax industry in the Pacific Northwest.

J. K. VOEHRINGER, JR., president of the Mock-Judson-Voehringer Co., Inc., of Greensboro, N. C., together with two other capitalists of that city, has organized the Home Industrial Bank of Greensboro, with a capital of $250,000.

NATHAN FRIEDLANDER, a member of the firm of Bethlehem Knitting Mills, Brooklyn, N. Y., and MISS DOROTHY KLEIN, social welfare worker, are to be married June 15, at St. George Hotel, Brooklyn.

HUGO HEMMERICH, associated with the Berkshire Knitting Mills, Reading, Pa., has been elected president of the Iris Club of Wyomissing, Reading, Pa.

Bachrach

Norman E. White, who was recently made assistant secretary of the Association of Cotton Textile Merchants of New York

Announcement has just been made by LUCIUS R. EASTMAN, president of the American Arbitration Association, of the appointment of additional representatives of the clothing and textile trades to serve on the Association's National Panel of Arbitrators. The new appointments are: A. I. BRICKNER, CHARLES R. BROWN, of Halle, Baer & Brown, Inc.; I. EDWIN GOLDWASSER, MORRIS W. HAFT, EMIL LANDAU, of Landau & Steinberg; RUBY MACK, of Chas. Douglis-Mack Co.; SAMUEL MUNDHEIM, president of Stern Bros.; MAYER H. SACKS, E. R. KAGLE and MORRIS KLEIN.

MAX MITTENDORF, prominently connected with the Wyomissing Industries, Reading, Pa., accompanied with Mrs. Mittendorf, sailed from New York on June 3 for an extended trip to Europe.

CHARLES E. LEIPPE, hosiery manufacturer of Reading, Pa., and past president of the National Association of Hosiery & Underwear Manufacturers was on May 29 elected recording secretary of the Reading Y.M.C.A.

The Cotton-Textile Institute elected 12 members to its board of directors at a meeting of the executive committee of the Institute on May 28. These new additions to the board include: WM. D. ANDERSON, Bibb Mfg. Co., Macon, Ga.; C. A. CANNON, Cannon Mills, Kannapolis, N. C.; J. H. CHEATHAM, Georgia-Kincaid Mills, Griffin, Ga.; W. B. COLE, Hannah Pickett Mills, Rockingham, N. C.; DONALD COMER, Avondale Mills, Birmingham, Ala.; PHILIP DANA, Dana Warp Mills, Westbrook, Maine; L. O. HAMMETT, Chiquola Mfg. Co., Honea Path, S. C.; WESTON HOWLAND, Warwick Mills, Warwick, R. I.; F. COIT JOHNSON, West Boylston Mfg. Co., Easthampton, Mass.; ALLAN MCNAB, New England Southern Corp., Boston, Mass.; W. B. MUNSON, Denison Cotton Mills, Denison, Texas; H. N. SLATER, S. Slater & Sons, New York, N. Y. CHARLES A. CANNON of Kannapolis, N. C., was elected a member of the executive committee to fill the vacancy caused by the resignation of H. R. FITZGERALD of Danville, Va. Mr. Fitzgerald will continue to serve on the board of directors.

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At the final annual meeting of stockholders of the Fairhaven Mills, New Bedford, Mass., held last week, HENRY S. KNOWLES was re-elected president for the coming year. Other officers elected were ARTHUR C. HIMES, treasurer, and JOHN M. BULLARD, clerk. In addition to Mr. Knowles and Mr. Bullard, directors chosen were: OLIVER PRESCOTT, SEABURY STANTON, IRVING W. COOK, ELMER A. MACGOWAN, HENRY W. DURANT, ERNEST R. HASWELL and EDMUND H. LELAND.

GOV. JOHN G. RICHARDS has appointed JOHN A. LAW, textile executive of Spartanburg; DAVID COKER, improved cotton seed breeder, of Hartsville, S. C., and R. G. RHETT, financier of Charleston, S. C., members to represent South Carolina on a committee to perfect permanent organization which will be known as the annual southeastern conference on economics. Three members will be appointed from each of the following States: Virginia, North Carolina, Georgia, Florida, Alabama, and Tennessee.

NELSON DOUGHERTY was appointed to the quotations committee and PAUL ELBOGEN and BERNARD H. ARONSON were appointed to the floor committee of the National Raw Silk Exchange, New York, by the board of governors on May 28.

E. F. CREEKMORE, of Fort Smith, Ark., who was recently made vice-president and general manager of the American Cotton Cooperative Association, has assumed complete control of the operation and personnel of the association, which comprises a number of offices in the United States and foreign countries, that formerly functioned as the American Cotton Growers' Exchange.

GEORGE S. RADFORD, executive vice-president of the Belding Heminway Co., has resigned effective June 1, but will continue in the capacity of advisory engineer.

WALLACE I. STIMPSON, vice-president and agent of the Draper Corp., Hopedale, Mass., has been chosen chairman of the board of directors to succeed the late FRANK J. DUTCHER.

J. N. CHRISTIE, formerly treasurer of Ackroyd Bros. (Boston) Ltd., Boston, Mass., is now associated with the Chautauqua Worsted Mills, at Jamestown, N. Y.

SPAULDING BARTLETT, former treasurer of S. Slater & Sons, Inc., RALPH K. HUBBARD, treasurer of the Packard Mills, Inc., and SHERMAN L. WHIPPLE, JR., president and general manager of the Chilton Co., all of Webster, Mass., have been elected trustees of the Webster Five Cent Savings Bank.

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BERNARD GOLDING, treasurer of the Southbridge (Mass.) Finishing Co., and the Sturbridge (Mass.) Finishing Co., and Mrs. Golding, sailed from New York on May 28, for a two months' honeymoon trip to Europe. Upon their return they will live in Fiskdale, Mass.

CHARLES A. ROOT, treasurer of the Uxbridge (Mass.) Worsted Co., Inc., delivered the address at the Memorial Day exercises in Mendon, Mass., on May 30.

PERCY AINSWORTH, general manager of Hockanum Mills Co., Rockville, Conn., was elected a director of the Connecticut Chamber of Commerce, at the annual meeting held at Hartford, Conn., May 21.

LOUIS B. HELIG is now manager of Union Hosiery Co., High Point, N. C.

HERBERT W. WILKINSON, general manager of the Southbridge (Mass.) Finishing Co., will address the Southbridge Manufacturers' & Merchants' Association on June 23.

Aragon-Baldwin Cotton Mills, Inc., with plants at Rock Hill, Whitmire and Chester, S. C., are making a number of changes in their personnel. J. D. TEMPLETON, superintendent for some time of the Whitmire plant, has resigned, and he will be succeeded by MAJOR J. T. CRAWFORD, superintendent of the Chester unit. W. J. STILL, superintendent of the Rock Hill plant, succeeds Major Crawford at Chester, and R. L. WOOD, superintendent of the weaving department of the Watts Mills, Laurens, will succeed Mr. Still at the Rock Hill plant.

RUDOLPH E. ILLI, retired superintendent of the Waterman Worsted Co., Inc., Putnam, Conn., left on May 28 for an extended tour of Europe, planning to be away four or five months.

J. P. HILL has resigned as superintendent of Wildan Mfg. Co., Cherryville, N. C.

MILTON SCHMIDT has been appointed sales manager of the women's wear division of Hamilton Woolen Co., New York.

CARL R. HARRIS, resident general superintendent of the Aragon-Baldwin Cotton Mills, Inc., with plants at Chester, S. C., Rock Hill, S. C., and Whitmire, S. C., who maintains his home in Chester, has purchased the beautiful home of H. M. DaVega, on York St., Chester.

W. L. CAMPBELL, JR., assistant superintendent of Rowan Cotton Mills Co., Salisbury, N. C., who has been ill for some time, has returned to his position.

H. P. MALLOY, of Lawrence, Mass., one of the officials of the Pacific Mills, recently visited the southern plants of the company at Columbia and other places in South Carolina.

C. S. HODGES has been appointed assistant to the superintendent of the carding department of Chadwick-Hoskins Co. Mill No. 1, at Charlotte, N. C.

CHARLES E. BUTTERWORTH, formerly designer for the Monohassett Woolen Mills, Providence, R. I., has taken the position as designer for the Puritan Mills, Plymouth, Mass.

GEO. F. HAIGH, designer for the Puritan Mills, Plymouth, Mass., has resigned his position with that company to accept a position as superintendent of the dyeing and finishing plant of the Cleveland Worsted Mills, at Ravenna, Ohio.

ROLAND A. PACKARD, safety engineer for the Ludlow (Mass.) Mfg. Associates has been elected a director of the Engineering Society of Western Massachusetts.

A. D. STRANDBERG, formerly comptroller of the Mohawk Carpet Mills, Amsterdam, N. Y., will leave next month for an extended sojourn in Europe.

N. A. LONG, chief chemist for the plant of the Beacon Mfg. Co., Swannanoa, N. C., has been transferred to the plant of this company in New Bedford, Mass., and will be in charge of dyeing.

J. T. JOHNSTON has been promoted from machinery inspector at the Payne plant of the Bibb Mfg. Co., of Macon, Ga., to an office position in Mill No. 2, of the Bibb company, and T. E. SANDIFER has succeeded him as machinery inspector at the Payne unit of the company.

ALEXANDER R. STEVENSON, superintendent of the dyeing department of the Bigelow-Sanford Carpet Co., Clinton, Mass., recently returned home after spending several months at St. Petersburg, Fla.

JAMES M. BENNETT, formerly of Roanoke, Va., where he was connected with the Viscose Co., has entered upon new duties as assistant engineer of the plant of the same company at Parkersburg, W. Va.

©Underwood & Underwood

Markham M. Flannery, director of the Federal Trade Practice Bureau, who presided at the wool underwear conference held at Utica last week.

ARTHUR BESSER has resigned his position as overseer of the sewing department of the George H. Gilbert Mfg. Co., Gilbertville, Mass, after 23 years of service.

T. B. BLACKWELL is now in charge of the spinning department of the Arcade Cotton Mills, Rock Hill, S. C.

B. D. COX, head of the weaving department of the Lydia Mills, Clinton, S. C., is now recuperating following a severe illness.

PATRICK FANNING, for many years overseer of spinning for the George H. Gilbert Mfg. Co., Gilbertville, Mass., has resigned his position.

THOMAS FARLEY, overseer of carding for Holden-Leonard Co., Bennington, Vt., has resigned his position with that company. He is succeeded by FRED MERCHANT, of Pittsfield, Mass.

THOMAS FITZHENRY, for the last 30 years overseer of dyeing for the Angus Park Mfg. Co., Hanover, Conn., has resigned his position with that company.

C. D. GILLIS is now master mechanic at the Wilbur Cotton Mills, Inc., Troy, N. C.

ROBERT A. GWYNNE has concluded 27 years of service as foreman of the dressing and twisting departments at the Beoli Mills of the American Woolen Co., Fitchburg, Mass.

P. V. GRAY is now second hand in the finishing room of the Arnco Mill, Newnan, Ga.

JOSEPH L. LACOSTE has retired after 64 years of service with the Otis Co., and the Ware Valley Mfg. Co., both of Ware, Mass.

JOHN E. MOFFITT, former overseer of spinning at the Rochdale (Mass.) Mills of the American Woolen Co., has accepted a position with the Channing Smith Textile Corp., Cherry Valley, Mass.

PATRICK H. MANNING has taken the position as night overseer of carding for M. T. Stevens & Sons Co., Franklin, N. H. This is a 14 set mill, running day and night.

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A. H. MCKENZIE has accepted the position as overseer of dyeing for the Mayfield (Ky.) Woolen Mills. Mr. McKenzie comes from Hanover, Ill.

RICHARD POTTER has accepted the position as overseer of weaving for the Palmer Mills, Otis Co., Three Rivers, Mass.

W. A. WALKER now holds a position in the laboratory of the Manville-Jenckes Co., Gastonia, N. C.

JOE WILSON is now head of the spinning department of the Chesnee (S. C.) Mills.

C. S. HODGES is now second hand in day carding at the Chadwick-Hoskins Mill, Charlotte, N. C.

NEWS about MILLS

Cotton

Lane Cotton Mills Co., New Orleans, La., recently awarded orders for Firth-Smith bunchless cleaners, for spinning frames and high-speed warpers.

***York Mfg. Co.**, Saco, Me., directors have recommended to stockholders to accept the offer of the **New England Industries, Inc.**, to take over the company by effecting an exchange of stocks. The New England company is affiliated with the New England Public Service Co. Plans for change include a tax abatement by the town of Saco.

***Fairhaven Mills**, New Bedford, Mass. With the auction of the real estate scheduled for June 10, completion of the liquidation and dissolution of the corporation is expected to be made. The proceeds realized from the auction will be used to pay off the indebtedness of $214,000 due bank creditors. In the event that the banks buy in the property, it is announced that preferred stockholders will be given the benefit of any subsequent sale which yields more than the amount due the banks.

*Plans of merger with the Bancamerican-Blair Corp., New York, involve several New England mills. Directors of the **Bristol Mfg. Co., Dartmouth Mfg. Co.** and **Neild Mfg. Co.**, of New Bedford, Mass.; **Davis Mills, Lincoln Mfg. Co.**, and **Pilgrim Mills**, of Fall River, Mass.; **Crescent Mills** and **Queen City Cotton Co.**, of Burlington, Vt.; **Warren (R. I.) Mfg. Co.; Lawton Mills**, Plainville, Conn., and **Grosvenordale Mills**, North Grosvenordale, Conn., have signified recommending merger plans to stockholders.

L. Robison & Co., West New York, N. J., converters of cotton and rayon yarns, have increased plant facilities.

Cannon Mills Co. Plant No. 9, Concord, N. C., resumed operations June 2, after closing down for one week due to having a cement floor laid in the opening room.

Rhode Island Mill, Spray, N. C., will shortly discontinue work for an indefinite period. The mill manufactures cotton blankets and employs between 200 and 300 people. It is probable that the blanket looms will be dismantled and another class of material will be manufactured when the plant resumes operation.

Hegeman & Co., Inc., Pawtucket, R. I., recently organized with a capital of 500 shares of stock, no par value, to operate a local mill for the manufacture of cotton yarns, will be represented by Coles Hegeman, 111 Elton St., Providence, R. I., principal incorporator. James T. Shepard, Pawtucket, is also interested in the new company.

Abbeville (S. C.) Cotton Mills recently placed orders with Borne Scrymser Co., New York, for 'Breton Minerol' process oil-spraying equipment.

Globe Mfg. Co., Gaffney, S. C. H. C. Moore, trustee in bankruptcy for the company, officially announces that he will sell the plant's assets on July 7, at the courthouse in Gaffney. The property consists of the buildings, machinery, dwelling houses and real estate. All cotton and yarn has already been disposed of by order of the referee in bankruptcy. The Globe Mfg. Co. was placed in bankruptcy several weeks ago. A list of claims filed with the referee showed liabilities in excess of $500,000.

Judson Mills, Greenville, S. C., are installing Taylor controls on the slashers throughout their plant.

Red River Cotton Mills, Rock Hill, S. C., were purchased at public auction, for the bondholders, June 2, by Haynesworth & Haynesworth, Greenville attorneys. The price paid was $35,150. It is announced that a reorganization of the company has been effected and the mill will begin operations immediately.

Tucapau (S. C.) Mills, branch of the **New England Southern Mills Corp.**, are installing in No. 1 plant 50 new Draper looms to replace 250 old type equipment, in order to manufacture cloth 48 and 50 in. wide.

Austin, Texas. The cotton mills of this section are operating on a curtailed basis, a number working on a half-time schedule, while others are running only five days a week, according to a report issued by the Bureau of Business Research of the University of Texas. Four of the 21 mills reporting, however, are maintaining full-time schedules.

Stuart (Va.) Mills, Inc., cotton blanket manufacturers, after remaining idle for more than a year, have been purchased by a stock company headed by I. C. DeHart, and the plant will soon be put in operation.

Canadian Cottons, Ltd., Marysville, (N. B.,) Can., have contracted with the New Brunswick Power Commission, Fredericton, for power supply for their local Gibson mill, totaling over 3,000,000 kw.-hr. per annum.

Wool

Berkshire Woolen Co., Pittsfield, Mass., is now operating at 100% capacity.

William E. Tillotson Mfg. Co., Pittsfield, Mass., worsteds and woolens and knit underwear, is operating 100 looms daily and 40 looms on an all-night schedule. Orders are sufficient at present to maintain this schedule until September.

Hamilton Woolen Co., Southbridge, Mass., shut down on May 28 until June 4 for semi-annual stock taking.

Hadley Mills plant in South Hadley Falls, Mass., was purchased May 27 for $43,000, by R. A. & S. P. Dunn, real estate operators of Holyoke, Mass. The sale was subject to approval by the bankruptcy court. Included in the sale were land, waterpower and about 100,000 sq.ft. of mill floor space, with several miscellaneous buildings. Machinery and equipment had been sold previously. When in operation the plant had an assessed valuation of $213,000.

Advance Fibre Process Co. has purchased mills in Stoughton, Mass., formerly owned by **Southworth Mills, Inc.**, for the purpose of serving the wool industry as custom manufacturers of reworked wool. The management is composed of the following board of directors: Charles Ray, president and treasurer, also president of Rogers Paper Mfg. Co.; Joseph M. Lurie, general manager and vice-president, formerly consulting chemist of Rogers Paper Mfg. Co.; Axel M. Lee, superintendent, formerly superintendent of Stoughton Mills, Inc.

New England Fibre Blanket Co., Worcester, Mass., has leased two floors in a plant at 164 Fremont St., that city, which will be equipped for the manufacture of fibre blankets, used in printing presses, from the raw wool to the finished product. The initial equipment will include 10 wide looms, which have been ordered from the Crompton & Knowles Loom Works, Worcester. Much other machinery will be needed for the preparation of the material previous to weaving and afterward. The company has never manufactured its blankets, but has had the material made for it in a Maine mill to its own specifications and they were assembled in Worcester. The headquarters of the company will be moved from 25 Foster St., to the new plant on July 1, and operations are expected to get under way in September. Theodore T. Ellis, is president and treasurer of the company.

Cocheco Woolen Mfg. Co., East Rochester, N. H., has received new business to keep the plant in steady operation well into fall.

Gonic (N. H.) Mfg. Co., manufacturing broadcloths, shirtings, dress goods, is considering installation of additional equipment for increased output. The company has recently secured some heavy orders.

Wilkins Worsted Mills, Inc., Philadelphia, Pa., recently organized by George S. Cox, 3051 North 15th St., Philadelphia, and associates, with capital of 1,590 shares of stock, no par value, to operate a local mill, will be headed by George W. Wilkins, Lansdowne, Pa. Mr. Cox will be treasurer. Others interested in the new company include Frank Cox and Newton P. Cox, Roslyn, Pa.

W. V. Smalley, 2537 East York St., Philadelphia, Pa., manufacturer of wool waste, has leased the two-story mill at

*Indicates previous mention of project.

2122-26 East Hazzard St., totaling about 10,000 sq.ft. of floor space, and will remodel and equip for a new mill.

Knit

Knit Goods Corp. of America, Decatur, Ala., with which the local **Alabama Hosiery Mills, Inc.,** were recently consolidated, has plans maturing for a new mill at Corinth, Miss., following favorable vote of municipality to invest $180,000 of municipal funds in the enterprise. It is said that the initial mill will cost about $700,000, with machinery. A site has been secured and it is planned that an installation of 80 full-fashioned machines be made.

Dovedown Hosiery Mills, at Griffin, Ga., are planning to double the capacity of their present plant in the immediate future. Plans call for the construction and equipment of a second unit for the plant.

Bear Brand Hosiery Co., Kankakee, Ill., contemplates an addition to mill at West Ave. and Hickory St., consisting of a four or five-story unit, to cost upward of $80,000, with equipment. It is understood that an architect will be selected in the near future.

Paterson (N. J.) Mutual Hosiery Mills, Inc., have suspended operations in their mill at Summer & Fulton Sts., owing to labor difficulties.

***Olga Knitting Mills,** Watertown, N. Y., have settled all claims of creditors on a 50% basis and the firm now plans expansion. While negotiations were carried on the plant operated at capacity.

Hatch Full-Fashioned Hosiery Co., Belmont, N. C., is running on an overtime schedule in several departments, developing increased capacity. A full working force is being employed.

J. A. Cline & Son, Hildebran, N. C., seamless half-hose and women's seamless hosiery, have added 200 new knitting machines and six loopers to their plant. The mill is running full time day and night.

Valley Knitting Mills, Inc., recently chartered by the Secretary of State, will build a plant on Middle Wheeling Creek, near Wheeling, W. Va., where several acres of land have been secured for the site of the plant, for the manufacture of knitted wear, including sweaters, undergarments, stockings, etc.

National Knitting Co., Milwaukee, Wis., has superstructure under way for a one-story fireproof addition, 44 x 55 ft., at 905 Clinton St., for which engineering contract recently was let to the Federal Engineering Co., 440 Milwaukee St., Milwaukee.

Silk

Willimantic (Conn.) Silk, Inc., and the **Kobe Silk Co.,** both operating in mills formerly operated by the Quidnick-Windham Mfg. Co., will each add 100 looms to their equipment. The Willimantic company will then have in operation 280 looms and the Kobe company 110 looms. Joint payrolls will be increased $10,000 a month through the addition of new operators.

Corticelli Silk Co., has started full time operations at its silk throwing plants in Haydenville and Florence, Mass. An encouraging rise in order volume is responsible for fuller schedules.

Kingsboro Silk Mills, Gloversville, N. Y., have increased operations and are now running on full time weekly schedules.

Huguet Silk Co., Hornell, N. Y., has awarded a contract to William E. Adams, Canisteo, N. Y., for the erection of a one-story addition to its silk manufacturing plant. With a new dye house now under construction, the total expenditure for expansion, with machinery and equipment, will exceed $50,000.

Plaza Silk Co., Paterson, N. J., is moving to Leola, Pa., and has obtained a long lease on the plant formerly occupied by the Dewalt Products Co., at Leola, Pa. Work of installing the machinery started this week and the plant will begin operations June 12, on a 24-hour basis with about a dozen employes. With preliminary negotiations completed the company is already looking toward the future and within the next month hopes to begin work on the erection of a new building to house additional machinery. The new structure will be 70x100 ft. and will adjoin the present building.

***Klotz Silk Mfg. Co.,** Blackstone, Va., expects to add about 100 looms at its local mill, which is now being extended and remodeled, doubling present capacity. Considerable machinery heretofore used at mill at Clifton, N. J., will be installed. The work of installation is scheduled to begin at an early date.

Finishing

E. I. duPont deNemours & Co., Wilmington, Del., will carry out an expansion and betterment program at its fabric and finishing mills at Newburgh, N. Y., Parlin, N. J., and Fairfield, Conn. The entire development will be conducted over a period of months, and is estimated to cost about $2,000,000.

General Piece Dye Works, Paterson, N. J., have awarded general contract to the Edward Reihl Co., 85 Delaware Ave., Paterson, for a two-story brick addition to mill at 52 Warren St. A building permit has been issued.

Williamsburg Silk Dyeing & Finishing Co., Brooklyn, N. Y., care of A. L. Grossman, 1440 Broadway, New York, attorney and representative, recently organized with a capital of $20,000, plans operation of local mill.

Erie Dyeing & Processing Co., Cleveland, O., has added 6,000 sq.ft. of floor space to its rayon converting department, which gives a total of 24,000 sq.ft. for rayon converting, according to R. W. Adler, general manager. The plant is working day and night.

Eddystone (Pa.) Mfg. Co., has awarded general contract to R. C. Ballinger Co., 925 Walnut St., Philadelphia, Pa., for addition to mill at Second St. and Saville Ave., to cost about $27,000, with equipment.

*Indicates previous mention of project.

Textile Patents

BLEACHING textile fibers by means of ozone, Process for. 1,760,042. Emilio Crespi, Crespi-sur-l'Adda, Italy and Marius Paul Otto, Paris, France.

BRAIDING machine. 1,760,768. Daniel H. Murphy, West Hartford, Conn. Assigned to The Wire-Mold Co., Hartford, Conn.

COTTON-cleaning machines, Attachment for. 1,760,037. John B. Brennen, Atlanta, Ga.

COTTON harvesting machine. 1,760,312. John E. Mitchell, St. Louis, Mo.

DRAWING textile rovings, Mechanism for. 1,760,745. Fernando Casablancas, Sabadell, Spain.

HARNESS-frame-leveling mechanism. 1,759,673. Harry W. Thatcher, Hopedale, Mass. Assigned to Draper Corp., Hopedale, Mass.

KNITTED fabric. 1,759,561. David H. Young, Dalton, Ga. Assigned to Westcott Hosiery Mills, Dalton, Ga.

KNITTING machines, Attachment for spring-beard. 1,758,716. Paul G. Perkins, Sauquoit, N. Y.

KNITTING needle. 1,759,363. Alexander C. Parlini, Woodside, N. Y. Assigned to Gotham Knitbac Machine Corp., N. Y.

LOOM attachment. 1,758,042. Harry Edward Hoffman, Williamsport, Pa.

LOOM for weaving carpets and like fabrics. 1,759,322. Ernest Joseph Perry, Birmingham, England.

LOOM for weaving carpets and like tufted pile fabrics. 1,759,308. Thomas William Head, Bridgnorth, and Ernest Joseph Perry, Birmingham, England.

LOOMS, Harness-controlling mechanism for. 1,759,047. Arnold Edelstein and George Kis, Budapest, Hungary.

LOOMS, Let-off mechanism for. 1,758,738. Clare H. Draper, Hopedale, Mass. Assigned to Draper Corp., Hopedale, Mass.

LOOMS, Let-off mechanism for. 1,759,531. William S. Wells, Los Angeles, Calif. Assigned to Wonder Weave, Inc., Boston, Mass.

LOOM, Needle. 1,759,532. William S. Wells, Los Angeles, Calif. Assigned to Wonder Weave, Inc., Boston, Mass.

LOOM shedding mechanism. 1,759,530. William S. Wells, Los Angeles, Calif. Assigned to Wonder Weave, Inc., Boston, Mass.

MULTIPLE-ply fabrics, Apparatus for making. 1,759,668. William C. Stevens, Akron, Ohio. Assigned to Firestone Tire & Rubber Co., Akron, Ohio.

SHEARS. 1,758,019. Thomas D. Williams, Cleveland, Ohio.

SHUTTLE for looms. 1,758,811. Ferdinand Souczek, Reichenberg, Czechoslovakia.

SHUTTLE operating mechanism. 1,759,533. William S. Wells, Los Angeles, Calif. Assigned to Wonder Weave, Inc., Boston, Mass.

SPINDLE for engaging and winding textile fabric. 1,759,095. Charles W. Coker, Hartsville, S. C. Assigned to Sonoco Products Co., Hartsville, S. C.

SPINNING process for polychromatic yarns, device for said process, and the product of said device. 1,759,260. Oswald Hoffman, Neugersdorf, Germany.

SPOOL winder. 1,759,002. Charles H. Collins (deceased), Amsterdam, N. Y. Assigned to Collins Loom Works, Inc., Amsterdam, N. Y.

TEMPLE, Intermittent thread-cutting. 1,758,882. Horace H. Burdett, Hopedale, Mass. Assigned to Draper Corp., Hopedale, Mass.

TENTER machine. 1,758,697. John H. Hamilton, Holyoke, Mass., and John H. Williams, Providence, R. I. Assigned to B. F. Perkins & Son, Inc., Holyoke, Mass.

TEXTILE. 1,758,622. Fulton Rindge, Ware, Mass. Assigned one-half to Edward C. Brown, Watertown, Mass.

VAT dyes to textile fibers, Application of. 1,759,071. Arthur R. Thompson, Jr., Charlotte, N. C. Assigned to Rohm & Haas Co.

VEGETABLE wool, Process for manufacture of. 1,759,752. Jean Jules Lambrecth, Nieppe, France.

WARPING machine indicator. 1,759,090. George W. Bogdanffy, Clifton, N. J. Assigned to Sipp Eastwood Corp., Paterson, N. J.

WASHING machine and method, Slack-loop. 1,758,174. Homer C. Riggs, Orange, Mass. Assigned to Rodney Hunt Machine Co., Orange, Mass.

WOVEN material and method of producing the same. 1,757,980. Carl E. Steiger, Oshkosh, Wis. Assigned to Deltox Rug Co., Oshkosh, Wis.

YARN in hollow mass formation, Apparatus for treating. 1,759,157. Ward N. Gere, Syracuse, N. Y. Assigned to Eclipse Textile Devices, Inc., Elmira Heights, N. Y.

Questions and Answers

We undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD.

Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. We do not undertake routine analysis of woven or knitted fabric construction, or investigation involving unusual expense.

All inquiries must be accompanied by the name of the person inquiring, not for publication, but as evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.—EDITOR.

Selvage for Basket Weave

Technical Editor:

I am very much interested in Edwin Gibbons' articles on weaving various cloths. I would like to ask him whether it is possible or practical to make a basket weave without a tap selvage. What holds the filling when the shed is standing open to take two or more picks of filling? How do you figure for your harness and reeds? (7192)

We have submitted this inquiry to Mr. Gibbons, who replies as follows:

"It is not possible to produce a fabric constructed of basket weave without breaking the weave at one edge; i.e., causing the selvage on one side to interlace one pick higher or lower than the rest of the fabric. The employment of a rib weave, twill weave, or plain weave at the edge is recommended.

"Fig. 1 illustrates the method of combining the 2-2 warp-rib selvage with a 2-2 basket ground; Fig. 2, the employment of the 2-2 filling-rib; Fig. 3, the use of the two-up-two-down twill; and Fig. 4, the use of plain weave—all with the same ground as in Fig. 1. The 2-2 warp-rib-weave selvage is to be recommended in most cases.

"Harness and reeds may be figured the same as for plain weave, excepting that the split in the reed should separate each pair of similar weaving ends. Otherwise these two ends are apt to twist around each other."

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Differences in Rayon Crepe

Technical Editor:

The enclosed two samples of rayon crepe were supposed to be identical in construction. However, sample D is preferred for its subdued luster and soft handle, whereas sample K has high luster and harsh handle.

We ourselves notice the following differences: Sample K has about 10% fewer picks than D, and the former is therefore more open in appearance. The warp of K lies flatter, and hence has the higher luster. The filling of K is instead pressed into more angular position, and hence has a harsh handle. K is a less elastic fabric in warp direction than D, but more elastic in the filling direction. We also note that upon stretching D in the warp direction, the luster increases and the handle becomes harsh and resembles K. We therefore conclude that the marked difference between these two samples is due to greater tension on the warp of K either on the loom or in finishing.

We shall appreciate your opinion as to whether this difference originated during weaving or during finishing. These were merely sample pieces and no claims are involved. Is there any other difference in construction that we have not noted? (7179)

The sley of sample *D*, is a full 108 in the finished state and that of sample *K* is a full 106. The picks per inch in sample *D* are fully 8% more than in sample *K*.

Sample *K* has been held out too wide in the finishing. This, coupled with the fewer picks per inch, has a tendency to open up the rayon warp and allow the crepe filling to twist at a greater angle. Permitting the warp to come in widthway creates a fuller appearance and feeling because the displacing power of the crepe filling is lessened and the warp face becomes smoother. It is just possible that a harder twist has been given the crepe filling in sample *K*. When a full crepe appearance and feel are wanted, the rayon filling is usually given from 60 to 65 turns per inch of twist. If less crepe is wanted, the filling is given about 50 to 55 turns.

The tension of the warp in the loom would not affect the cloth in the manner shown in the samples. It is a hard matter to keep all warps at the same tension when weaving. Our opinion is that the difference in the picks per inch and possibly some differences in the twist in the filling and in the handling during finishing are responsible for the difference in the two samples. Regarding the higher luster in sample *K* as compared to sample *D*, a low-luster warp may have been used for the weaving of sample *D*, but this is hard to determine after the cloth is finished.

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Fuzziness in Silk Stockings

Technical Editor:

What are the most usual causes of fuzziness in silk stockings? (7193)

Probably the most likely cause of fuzziness in silk stockings is bad needles. These create needle streaks, which are narrow lines of broken fibers along one wale. A bad sinker will also cause this type of defective work. In rare instances a rough cone will cause yarns to be roughened and this will result in fuzziness in the stock-

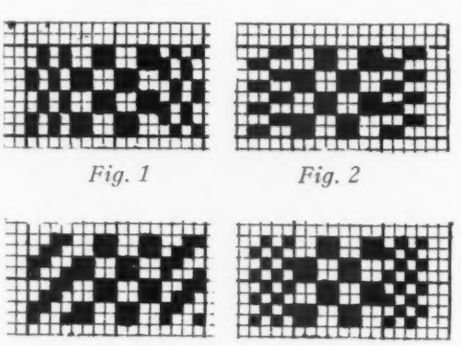

Fig. 1 *Fig. 2*

Fig. 3 *Fig. 4*

Selvages for basket weave

ing. It is possible to put enough tension on the yarns so that the needles will sometimes cut the fibers, but this is not common. Sometimes a badly worn guide will chafe the yarn and break enough fibers to cause fuzziness.

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The Use of Pulled Wools

Technical Editor:

Will you please give us your opinion on the suitability of pulled wool for either knitting or weaving yarns? Do you consider that it always handles harsher than fleece wools? (7149)

Approximately 8% of the virgin wool used in the woolen and worsted industries is pulled wool. As a result of this large quantity of good material, most mills include pulled goods in their blends. The woolen manufacturer uses them extensively in varying percentages up to 100%. The worsted-yarn manufacturer uses them whenever possible in his blends; the percentage used varies, but it probably averages around 10%. In addition, 100% blends of wool are processed, distinguished from the other blends by a letter *P* (for "pulled") after the quality number.

In general, pulled wools lack the life, elasticity, and bloom (luster) of fleece wools, although there is a difference in the handle and feel of one pulled wool as compared with another of similar quality. Even if pulled by the same process, the skins may be "green," salted, or sun-dried, each affecting the wool fiber differently. The time elapsing between the slaughtering of the animal and the pulling of the wool affects the characteristics of the fiber.

The greatest difference, however, is produced by the method of pulling. The depilatory process—in which a solution of water, sulphide of soda, arsenic, soda ash, and lime water is used—is said to destroy more of the life of the wool than does the lime process, removing some of the natural lubricants from within the walls of the fiber. The lime process is objectionable because such pulled wools are difficult to scour, due to there having been as much as 8% lime in them.

A knitting yarn made from 100% pulled wools will not have the same luster, fullness, elasticity, and handle as a 100% fleece-wool yarn would have. The ideal knitting yarn is one French spun from a 100% fleece-wool top. The use of pulled wools in weaving yarns is a question entirely controlled by factors outside of weaving; viz., the fabric, the finish desired, and the price. So long as the use of pulled wools does not interfere with the production of the counts required, with the evenness of the yarn, or with the results desired in finishing, they can be used to any extent desired. Pulled wools when processed 100% do not spin as well and make considerably more waste, especially flyings, brush-waste, and sweepings.

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Finishing Cotton-Worsted Fabric

Technical Editor:

I am enclosing herewith a sample of a fabric which I believe is made from cotton warp and worsted filling. Will you kindly inform me whether the fabric has been subjected to a finishing process, or is this the state in which it comes from the loom? Any information you can convey will be appreciated. (7168)

THOUSANDS of inquiries are handled annually by the Technical Editors. In order that as many readers as possible may benefit from this service, we select problems of general interest for publication each week.

The sample submitted has been treated both in the wet and dry finishing. This type of cloth is usually set on the two-bowl crab, steamed for a few minutes to prevent cockling, scoured in the regular way, dried, and pressed. The question of steaming or shearing is a matter of whether or not the selling price will allow the additional work and cost.

◆

Streak on Knitted Fabric

Technical Editor:

We are sending you sample of knitted wool-and-cotton underwear showing a brown streak. This, as you will notice, has affected the cotton in the cloth, and in spots has destroyed it completely.

This cloth is composed of 25% pure wool and 75% of China cotton. The stock is carded, spun, and knit in the usual way, without coming in contact with any acid or alkali. After the cloth has been scoured in tom-tom and roll washing machine it is put in a dyeing machine and boiled for one hour with ¼ grain of yellow dye and 2% of acetic acid. The acid and dye are added while the cloth is running in the water; these are poured into division of the tub and in concentrated form do not come in direct contact with the goods. This stain does not show until the garment has been through the sulfur-bleach house, and does not always show then, but in many cases develops after the garment is worn once and sent to the laundry.

We have checked over our operations again and again and cannot seem to find where the trouble is. We are running all-wool and wool-and-rayon goods in large quantities through the same process. Can you give us any idea what can be the trouble, and what is burning out cotton from the material? It only occurs every once in a while. The difficulty is that goods go out showing no damage and the trouble develops afterward. (7167)

We have examined the sample of wool-and-cotton underwear, and have found that there are still on the cloth, where the brown places appear, traces of sulfurous acid. In the process of bleaching with sulfur, goods are put in the sulfur house moist; when the sulfur is burned, sulfur dioxide is formed. This unites with the water in the goods, forming sulfurous acid. If the filters are not neutralized with a little ammonia and given a good washing after bleaching, this sulfurous acid will remain in the goods after drying. Cotton is affected by acids to a greater extent than wool. This fact explains why you have no trouble with your all-wool cloth. The goods in some cases have sufficient strength left to hold together while going through the mill processes; but upon being washed in the laundry, the wetting is enough to

weaken the damaged fibers of the cotton and allow the streaks to appear.

We suggest that after the goods come from the bleach house you wash them thoroughly in a machine fitted with overflows, so that the water is ever changing; then neutralize with a small amount of ammonia; and finally wash again until the odor of ammonia is removed. This should eliminate your trouble.

◆

Finishing Formula for Printed Fabric

Technical Editor:

We are enclosing herewith a sample of printed fabric and would appreciate any information you can give us that will enable us to duplicate the finish. (7174)

To duplicate the finish of the enclosed sample the following starting formula may be used: 30 lb. corn starch, 25 lb. tapioca starch, 20 lb. tallow softener (25%) made up to 150 gal. Run the goods dry through an ordinary starch mangle and over a stack of dry cans to a tenter frame, framing to ½ in. over finished width. Sprinkle the goods lightly and run once through a five-roll calendar. This should produce approximately the finish desired. If further weighting is necessary, the amounts of starch and tallow may be increased. Reducing the amount of softener will make the fabric stiffer, while increasing the percentage of softener will give a more flexible finish to the goods.

◆

Mildew on Thrown-Silk Crepe

Technical Editor:

We are having trouble with thrown-silk crepe in that it becomes mildewed after we let it stand in our vault any length of time during the spring and summer. The oil that we use is a combination of 75% neatsfoot and 25% mineral oil. .The yarn is 13/15 and 20/22 Japan and China silks; the kind is crepe; the silk is on bobbins.

Our mill is humidified only in the redraw department. The water supply is from natural reservoirs in this vicinity, and is about two-point hardness. The mildew is not general throughout the mill or on the walls. It is confined to the silk alone. Silk is not stored in a damp place. We have about 11% to 12% moisture in our crepe yarn that is wound on spools stored ready for shipment to different manufacturers. Four bobbins are wrapped in glazed kraft paper and the silk is stored and shipped in this form. (7166)

The best condition for the development of mildew is a dark, damp room at a temperature under 70° F. The positive effect of mildew on silk crepe is the softening and removal of the sericin; there is, in addition, a formation of various coloring matters which stain the silk and resist a severe boiling off in soap; mildew also causes irregularities in the absorption of tin and dye, and leads to streaky dyeing.

According to the information given, the silk is not stored in a damp place and mildew only develops during the spring and summer. The silk contains from 11% to 12% of moisture. A possible source of the mildew is from the water supply; bacteria may get on the silk either in the soaking bath, from the moist air supplied by the humidifier, or, if the wet method is used to set the crepe twist, from the setting bath. Moist crepe in humid spring and summer weather is a fertile field for rapid development of bacteria.

We suggest as a remedy, if the wet method of setting the twist is used, to substitute the steaming method and to use a modified carbonate of soda in the soaking emulsion to destroy the bacteria. If you prefer the crepe set by the wet method, to destroy the spores add from 3 to 5 oz. of chloride of zinc to 100 gal. of water in the wet bath.

◆

Filling Wind vs. Warp Wind

Technical Editor:

Why is filling wind considered preferable to warp wind for cotton warp yarn? (7215)

Filling wind permits more yarn to be wound on a bobbin, eliminates the necessity for removing a bobbin when piecing an end, and makes possible a higher unwinding speed in later processes.

◆

Holes in Wool and Rayon Fabric

Technical Editor:

We are enclosing a sample of wool and rayon in which the wool has been dyed black. You will note that we have marked two holes in the sample, by means of cotton thread. These goods have been dyed in the piece. Kindly examine these defects, and give us your opinion as to the probable cause. In this connection we would like to mention that, in order to obtain the required width in finishing, considerable tension is required, compared with most of the other qualities we are processing. (7162)

You do not state just what processing is done on this class of material; we assume, however, that the fabric is fulled, scoured, dyed, dried, and pressed. When rayon is used in either woven or knitted fabrics of this type, holes are frequently encountered. Usually they are caused by undue tension. Where the goods come in contact with the bottom of the fuller, it is well to have the bottom of the mill lined with aluminum; this will give a smooth surface, preventing any chance of resistance while in the process of fulling. Wrapping the top and bottom rolls of the washers with a light-weight cheese cloth will also help in overcoming this trouble—fifteen to twenty yards will answer the purpose and should be put on the rolls wet.

The fact that difficulty is experienced in getting the finished width is no doubt one of the causes for holes. This can be partly overcome by drying these goods twice. When giving the first run on the jersey dryer do not attempt to get the required finished width, and make sure that the goods are not thoroughly dry. The second run will not cause such a strain on the fabric and there will be less chance of breaking the rayon, while at the same time you will find less tension is needed to attain the finished width. Every time the goods come in contact with water there is some shrinkage, and there is a tendency for the worsted to crawl away from the rayon. This trouble does not show while the fabric is allowed to remain under its natural shrinkage; but just as soon as you try to bring it back to its original length or width, since rayon has not the elasticity of wool, holes result.

New Machinery & Processes

Automatic Humidity Regulator

THE ParkSpray Hygrostat, an automatic regulator designed to secure uniform conditions of humidity, has been brought out recently by Parks-Cramer Co., Fitchburg, Mass. Use of this device is said to enable more uniform regulation of humidity than is possible by hand control, and at the same time to reduce the operating cost. In addition, automatically regulated humidification reduces regain variation and thus simplifies the regain-adjustment problem in spinning.

In the Hygrostat, strands of human hair are mounted directly in the path of a draft of room air induced by a small ejector. These sensitive strands react quickly to any change in the moisture content of the air and immediately actuate the regulator. Since the regulator is designed as a precision instrument—sensitive, accurate, and dependable—high-grade materials are used throughout. To secure any desired degree of relative humidity, the calibrated scale is set at proper position, and the Hygrostat holds the humidity at that point. The upper end of the actuating member is secured to a yielding spring, so that unusually dry conditions will not throw undue strain on the hygroscopic element. A compensating screw is provided to bring the device back on scale as it becomes necessary. The relative-humidity setting is changed by turning the indicating scale at the bottom of the instrument. This can be done by anyone provided with the regultor key; but the setting cannot be tampered with by an unauthorized person.

Automatic humidity regulator

Device for Originating Designs for Fabrics

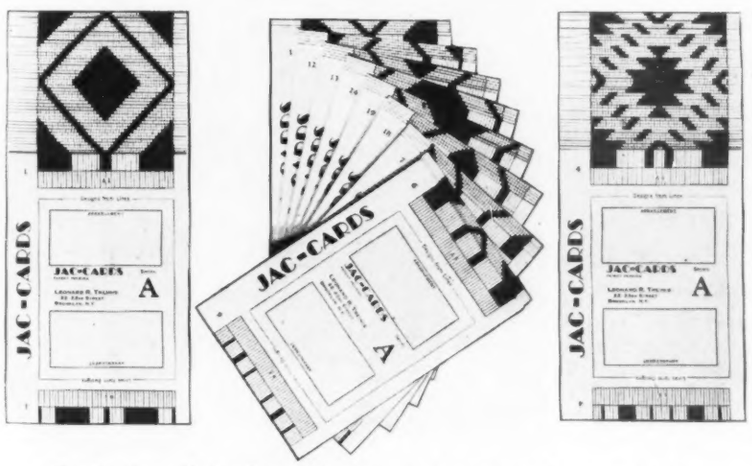
THE Treinis system of designing, developed by Leonard R. Treinis, 74 Bay 26th St., Brooklyn, N. Y., is a method of originating new and unusual designs for all mediums requiring designs worked out on cross-section paper. The designing is done by a system of cards called "Jac-Cards."

Some of the products to which this system may be applied are fancy worsted weaves, fancy elastic webbing for garters and suspenders, fancy borders for toweling, designs for rugs and carpets, designs for silk cloths used for neckties and dress goods, designs for flat and circular jacquard machines in multi-color work, designs for fancy seamless hosiery made by reverse plating, designs for fancy seamless hosiery using a floating thread, and designs for trick-wheel knitting machines.

Designing with Jac-Cards is said to have many advantages over the present method of graph-paper designing. For example, in designing fancy seamless hosiery made by reverse plating, countless new and pleasing hosiery designs may be created quickly without even using pencil and paper. Each design as created is a balanced unit matching perfectly both horizontally and vertically. The Jac-Cards show how the design will look up and down the stocking and also around the stocking. With this design system one design unit fits all machines regardless of the number of needles in the machine. On knitting machines using vertical selectors to control the design, one set of selectors will make countless new designs instead of only the one design the selectors were cut for.

The number of cards in a series of Jac-Cards varies with the type of machine for which the designs are intended and the number of steps to be used in adapting the design to the machine. The particular series of Jac-Cards illustrated contains 48 cards.

The upper edge of each card in the series is marked similar to a line of a design on a sheet of cross-section paper. There are 24 different markings in the Series A cards illustrated. These cards are numbered from 1 to 24. There are two No. 1 cards, two No. 2 cards, etc. Half the cards are arranged in order from 1 to 24, with No. 1 card on bottom. The remaining cards are arranged from 24 to 1, with No. 24 card on bottom. The second half of the cards is placed on the first half. The 48 cards will then be arranged with the No. 1 cards on top and bottom and the No. 24 cards in the middle of the deck. The master design formed by this series of Jac-Cards will then be seen by exposing about $\frac{1}{16}$ in. of the marked edge of each card. The illustration on the left shows this arrangement.



Device for originating designs for knit goods and woven fabrics

Countless new designs are quickly obtained merely by changing the numerical arrangement of the Jac-Cards. Symmetrical designs will always be created by rearranging one-half of the cards (from 1 to 24) in the same

Ironing machine for rayon underwear

order as the other half of the cards (from 24 to 1). The latter is the only rule to follow in changing the cards to get new designs. Otherwise there is no limitation on the numerical arrangements of the cards. Every possibility that the mind suggests in changing the position of the cards will yield a new design.

The illustration on the right shows a new design created by the Series A Jac-Cards. To get this design, half the cards were re-arranged four at a time in the following order: 4-3-2-1, 8-7-6-5, 12-11-10-9, 16-15-14-13, 20-19-18-17, 24-23-22-21. The other half of the cards were arranged in the same order. The center illustration shows another arrangement of Series A with the deck of Jac-Cards broken up. When the cards in this arrangement are stacked like the sets on either side, a new design will be seen.

When the marked edges of the cards are held vertically, the design will correspond to the pattern up and down the stocking. By holding the cards vertically and shifting the bottom half of the cards to the top, the repeat of the pattern around the stocking is seen.

When the marked edges of the cards are vertical, they correspond to the selectors that fit into the drum of the machine. The selectors should be knocked out using the markings on the edges of the cards as guides, in the same manner that the selectors are now cut to correspond with a line of design on graph paper. When this system is followed, every new design created by a series of Jac-Cards may be duplicated on the machine using the original selectors. The selectors are merely rearranged in the drum of the machine to correspond with any new arrangement of the Jac-Cards. The expense of knocking out new selectors is minimized; and a saving is effected by using a set of selectors a great many times instead of only once.

Comparative-Size Yarn Table

QUICK comparison of yarn sizes is made possible by means of a comparative-size sliding yarn table issued by T. J. Porter & Sons, 1600 Arch St., Philadelphia, Pa. The table, which is of handy pocket size, contains information of value to textile manufacturers; it is being distributed without charge to friends and customers.

By means of the table, sizes of various types of yarns are easily compared. For example, if the slide is set so that 18 appears in the cotton column, it can be seen at once that an 18s cotton equals in size a 27s worsted, a 50-cut woolen, a 10-run woolen, a 30s metric, or a 300-denier rayon. Yardage to the pound and the weight in grains per 100 yd. are also given. In addition, other yarn calculations are simplified.

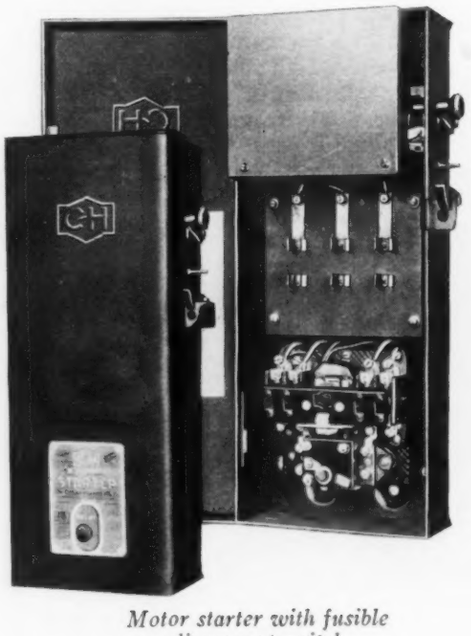
Ironing Machine for Rayon Underwear

DEVELOPMENT of an improved commercial machine for ironing rayon underwear has been announced by the Ironrite Eastern Corp., 225 West 34th St., New York. This industrial-type Ironrite is said to be applicable to all classes of rayon underwear and to give results superior to hand ironing. Among the features of the machine are two open ends, enabling the operator to iron at either end of the machine. In using the Ironrite the fabric is run under the roll and over the shoe, so that the points on the shoe fan out the gathers and insure complete ironing. The machine is designed to give uniform pressure at all points without leaving iron marks, while knee control permits the operator to use both hands to manipulate the garments.

Motor Starter with Fusible Disconnect Switch

CUTLER-HAMMER, INC., 207 Twelfth St., Milwaukee, Wis., announce the development of a new a.c. across-the-line, automatic starter combined with a fusible disconnect switch in a single steel enclosing case. This new starter may be used in place of the separate starter and fusible disconnect switch, requiring less space and simplifying installation.

A feature is a wiring channel between the starter panel and the back of the enclosing case; this allows the



Motor starter with fusible disconnect switch

connecting wires to be run behind the panel, where they cannot interfere with the operation of the starter. Ample room is provided to bring all of the connecting wires in at either the top or the bottom of the case according to installation requirements. All parts are mounted on a back plate which is easily removed for pulling and placing of line and motor wiring.

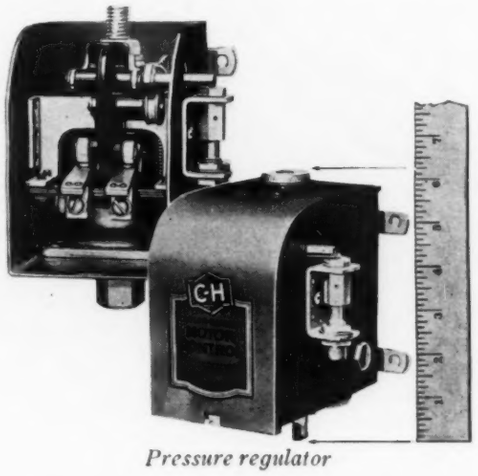
The disconnect switch is manually operated from the outside of the enclosing case. A cover interlock prevents opening the cover when the switch is closed and prevents closing the switch if the cover is open, unless the interlock is manually released. An electrical interlock insures that the magnetic contactor of the starter is always open when the disconnect switch is open. The fuse clips are mounted on a slate base, just below the disconnect switch.

Slitting Machine for Knit Goods

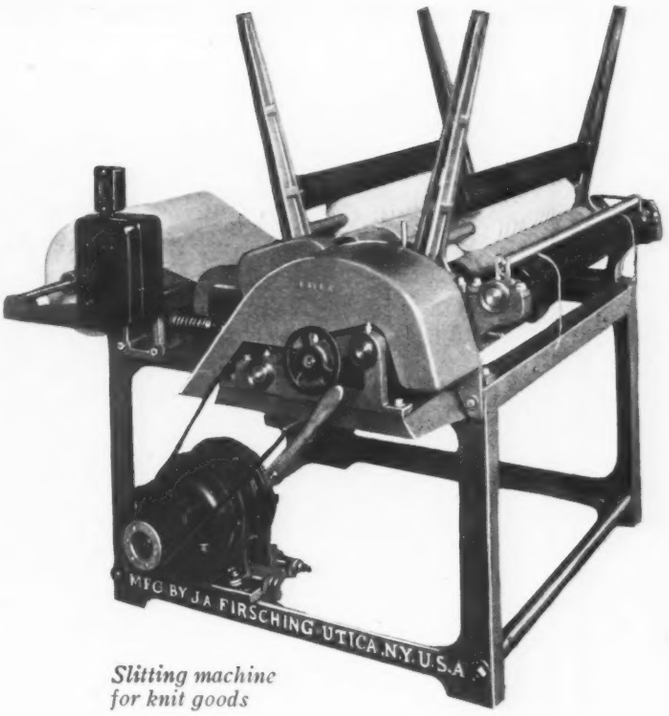
HIGH-SPEED slitting machines for knit goods have been placed on the market recently by J. A. Firsching, Jr., Inc., 614 Broad St., Utica, N. Y. Knit-cloth slitting machine No. 1 is designed to cut an entire roll of tubular fabric into strips and to roll it on a paper core in one operation. It is stated that from 100 to 150 ft. of cloth per minute can be cut without curling, and that various widths can be cut at one time. Another advantage claimed is that all weights of knitted fabric of woolen, cotton, rayon, or silk are handled satisfactorily. The high production of the device and its accuracy are said to result in savings of both material and labor Standard equipment includes bronze bearings throughout, Zerk oiling system, and motor drive.

Vibration-Insulating Material

A VIBRATION-INSULATING material consisting of a resilient, rubber-like substance held between coarsely woven jute cloth or burlap is being offered by the International Products Corp., 425 Van Buren St., Milwaukee, Wis., under the trade name, Keldur. Like rubber, it tends to deaden noise and check vibration. But it is claimed not to be subject to deterioration in the presence of oil and not to harden. It possesses durability against mechanical and chemical disturbances and is said to retain its elasticity almost indefinitely. The initial compression varies between 1 and 6%.



Pressure regulator



Slitting machine for knit goods

The material can be used for either light or heavy textile machinery, for motors and generators, presses, transmission equipment, prime movers, and all kinds of machinery where noise and vibration are to be held at a minimum. It can be used to soundprooof doors and walls, and as a floor covering over concrete.

Between the frame of the machine and Keldur wooden strips 1¼ to 2 in. in thickness should be placed, preferably connected together in the form of a frame. If, for example, a motor is to be insulated, two planks are placed under the sliding track and the insulating material is tacked to the planks, which are bolted to the floor, wall, or ceiling in the usual way. Thin metal plates can be substituted for the boards, and this procedure would be desirable for appearance' sake in the case of a built-in motor drive on a production machine.

Pressure Regulator

ANNOUNCEMENT of a single-pole pressure regulator, exceptionally small in size, is made by Cutler-Hammer, Inc., 207 Twelfth St., Milwaukee, Wis. This new device, designated as Bulletin 10,006, can be used as a starting switch for motors up to one horsepower, 230 volts, a.c. or d.c., or as a pilot switch in the control circuit of automatic starters for larger motors. The regulator closes the circuit at low pressure and opens the circuit at high pressure. It can be adjusted to open the circuit at any pressure from 30 to 200 lb.

Applications are said to range over a wide field; it can be used for maintaining pressure on systems containing air, gas, water or other similar fluids. For air-compressor service, a small unloader device at the side of the case removes back pressure.

To withstand moist atmospheres, the enclosing case is black japanned and metal working parts are cadmium plated. Double-break silver contacts prevent pitting and insure good contact. The diaphragm is of rubber. Conduit knockout holes in the case facilitate wiring.

DURENE

REG. U.S. PAT. OFF.

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YARNS

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123 SOUTH BROAD STREET

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432 Fourth Ave.
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418 [illegible]in St.
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323 So. Franklin St.
CHICAGO, ILL.

James Building
CHATTANOOGA, TENN.

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BOSTON, MASS.

HAMILTON, CANADA

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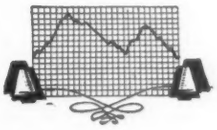
Representatives in All the Principal Countries of the World

TEXTILE WORLD ANALYST



Firmer Wool Markets Are Probable

Increased Stability of Raw Material Would Bring Improvement in Yarn and Cloth Prices, Says Dr. Haney

SUMMARY

With foreign wool markets strong and domestic wool stocks much reduced, firmer markets here are probable. Worsted yarns are likely to fall but little lower. Broadly speaking, cloth markets now appear to be stabilized.

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The analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

THE wool manufacturing industry improved somewhat during May. The strength of raw-wool prices in Australia and South America was confirmed by the closing of the London auctions at 5 to 15% above the close of the previous series. The outlook for stability of raw-material prices is of outstanding importance to wool textile manufacturers.

The April statistics indicated increased activity in practically all branches of the wool-manufacturing industry, and production in the various stages of manufacture appeared to be in good balance. But, regardless of the direction of activity, the level of activity is low, and, with continued low buying power, can not be expected to make any but slow gains. Low farm income and no increase in factory payrolls and employment, together with low exports, indicate the condition of general purchasing power and demand. Consequently, the demand for wool apparel is weak, and buying is likely to be held down to minimum requirements for some time.

The Favorable Factors

1. Foreign raw wool prices were stronger in April, both in primary and in secondary markets. The maladjustment between domestic and foreign prices is tending to diminish.

2. Stocks of raw wool in the hands of dealers and manufacturers at the end of the first quarter were the lowest in the post-war period.

3. Mill consumption of raw wool increased during April. Almost all branches of wool-machinery activity also increased more than seasonally over March.

4. Receipts and imports of raw wool have been increasing more than seasonally for two months without any proportionate weakening of prices, indicating an increase in demand.

5. Bradford top and yarn prices have been rising in recent weeks.

6. Wholesale dry-goods sales increased in April.

7. The Wool Institute's April statistics indicate a decline in stocks of cloth; production and billings are about equal.

8. Payrolls and employment in United States factories decreased slightly less than is usual in April. This suggests more stable urban consuming power.

9. The leading manufacturer announced some advances in cloth prices.

The Unfavorable Factors

1. The number of sheep in most of the northern-hemisphere countries, except Russia, is larger than a year ago. The clip in the Southern Hemisphere is expected to be large in 1930.

2. Domestic raw wool prices are still out of line with prices of similar foreign grades.

3. Both spinners' and weavers' replacement margins have declined in recent months.

4. Commodity prices in general are still weak.

5. The purchasing power of farmers and factory laborers is poor, and exports in general continue to decline.

6. The P-V Line is still below normal.

7. The apparel trades are buying from hand to mouth, and in some instances stocks of cloth are backing up on the manufacturer.

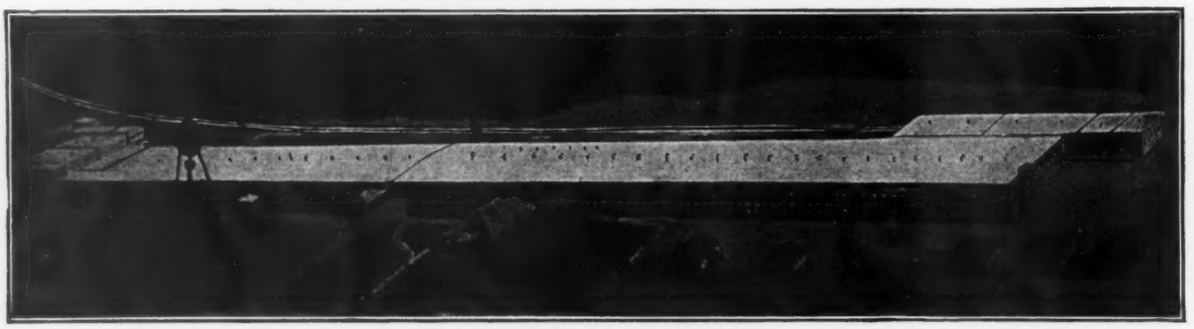
The favorable factors seem to be stronger this month, and are of more immediate importance. Domestic wool prices are so influenced by foreign wools that higher prices abroad will, after some lag, tend to bring stronger wool markets here. They improve sentiment. Yet the rise in foreign wools cannot be expected to carry on at the recent rate. There has been no recent fundamental change in supply conditions, and world commodity markets continue depressed. The improvement probably marks the end of the declining trend in wool prices abroad, but so far is in the nature of a "covering" movement by "shorts."

Raw-Wool Statistical Position Stronger

The Textile World index of raw-wool prices declined during May to 65.4% of the average for 1921-1928. This compares with an index of 66.9% in April and 93.8% in May, 1929. Raw-wool prices, as measured by this index, are the lowest since January, 1921.

The decline in raw-wool prices in this country has been going on, notwithstanding the tendency toward higher prices in most foreign markets. Domestic prices are still too high compared with foreign prices, and the readjustment between the two may take a considerable amount of time.

The statistical position of raw wool,



Spinning Mill, Lincolnton, N. C.

Announcement!

PICOT tops at nearly ONE-HALF (½) the cost of silk.

Many of our full-fashioned hosiery customers are now using with very good success, our high-grade COMBED SEA ISLAND MERCERIZED GASSED Yarn dyed in INDANTHRENE colors for their picots and striping instead of expensive silk.

This yarn is spun from the finest Sea Island cotton, making it very strong, smooth and with an exceptional high lustre. It is also being used with marked success in making of shadow clocks. We can supply this yarn in counts from 50/2 to 140/2.

If you are making picot tops or shadow clocks, send for a sample cone today for a trial—we are sure you will be very pleased with the results.

MONEY SAVED IS MONEY EARNED

BOGER & CRAWFORD

"From the Cotton Field Direct to You"

J. and E. Venango Sts.
PHILADELPHIA, PA.

however, has improved somewhat. Stocks of raw wool in the hands of dealers and manufacturers at the end of March were the lowest since the war period. Inasmuch as receipts and imports of raw wool are below normal, the tendency for them to increase may be construed favorably. An upturn in imports, after a prolonged decline, usually marks a turn in raw-wool prices.

Mill consumption of raw wool increased during April, though the level is still very low. The ratio of imports to consumption has declined; but shows a tendency to move with imports and, since these are increasing, the ratio may be expected to rise.

Most of the foregoing facts tend to support the view that the worst of the decline in domestic raw wool markets is over. World supplies are still large, however, and the prospect is for large new clips in most wool producing countries. Moreover, the general commodity price level continues to move downward. For these reasons, increased stability and firmness are to be expected in domestic raw-wool markets rather than an immediate, sustained rise.

Worsted Yarn Outlook Brighter

The Textile World index of worsted sales yarn prices during May continued to decline at nearly the same rate as in April. The index fell to 78.3% of the average for 1921-1928, which compares with an index of 80.8% in April and 95.6% a year ago. This brings the Textile World yarn price index to a new post-war low. The previous bottom was touched during the fall of 1921. This agrees fairly well with the general level of commodity prices, for the Bureau of Labor Statistics' wholesale commodity price index also touched new post-war lows in recent months.

Domestic raw-wool prices continued to decline in May, and, since yarn prices tend to lag raw-wool prices slightly, further weakness in yarn is not unlikely. But there is another side to the picture. Worsted spindle activity was reduced in April to the lowest level since January, 1921, while loom activity increased, thus making for a better balance between yarn production and consumption. And this increase in loom activity probably was a healthy one, as indicated by our cloth barometer.

When the balance between spindle and loom activity is as favorable as it was during April, an improvement in the replacement margin of spinners is usually not far off. It now seems probable that the margins will make a better showing within the next few months, followed by firmer yarn prices. Any improvement in raw-wool prices would be quickly reflected in the price of yarn.

Wool Cloth Situation Improves Further

The Bureau of Labor Statistics' cloth price index during April declined to 88.4% of the average for 1921-28. This compares with the March figure of 89.8%, and with 99.0% for April, 1929. Not since March, 1922, have wool cloth prices been so low.

The weakness of cloth prices, however, has been chiefly the reflection of a weak raw-wool market, for the current replacement margins of wool textile manufacturers are not much below the February level, which was the highest since 1925. That is to say, although the declines in raw-wool prices have been followed by declines in cloth prices, and although demand has been poor, manufacturers have so regulated their output that they have reduced their unit cost. Cloth prices have declined less per pound than have raw-wool prices, because of the control over the supply factors.

It is not to be expected that wool-cloth prices in terms of cents per pound will decline as much as raw-wool prices. Certainly comparisons on a percentage basis are erroneous, and not to be considered when price spreads are measured. Allowing for a few months lag in reflecting lower raw-wool prices, cloth prices should not decline so long as production is kept down to requirements.

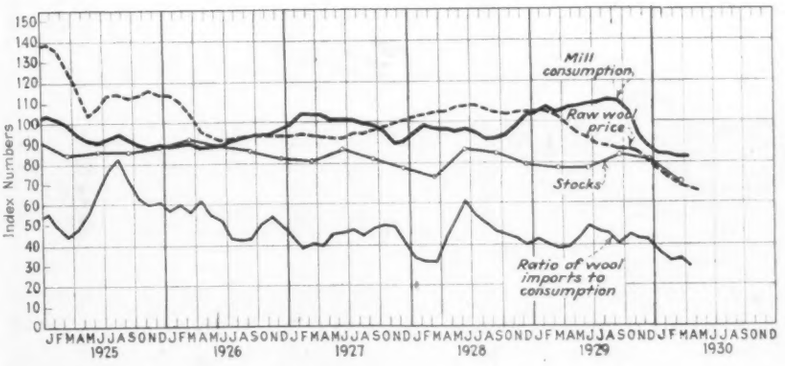

Index Numbers
Mill consumption
Raw wool price
Stocks
Ratio of wool imports to consumption
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1925
1926
1927
1928
1929
1930

Fig. 1. RAW WOOL BAROMETER: Price—Textile World Index; Mill Consumption—Grease Equivalent, Average Daily, Adjusted for Seasonal Variation, 3 Month Moving Average; Stocks—U. S. Total, Grease Equivalent, End of Quarter, Adjusted for Seasonal Variation. Average for 1921-1928=100 for all three Indexes; Ratio of Raw Wool Imports to Mill Consumption—Imports not reduced to grease equivalent, Adjusted for Seasonal Variation, Consumption as above. Average 1921-1928=50, 3 Month Moving Average.

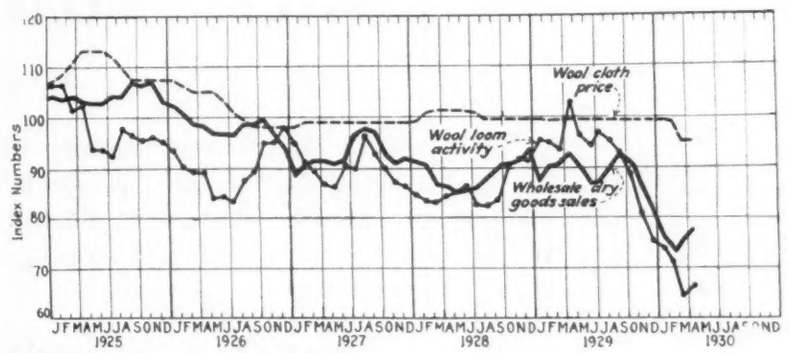
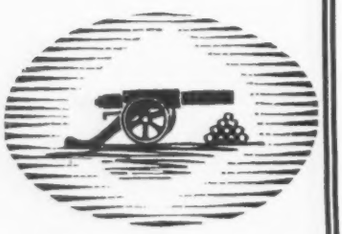

Index Numbers
Wool cloth price
Wool loom activity
Wholesale dry goods sales
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1925
1926
1927
1928
1929
1930

Fig. 2. WOOL CLOTH BAROMETER: Wool Cloth Price—Textile World Index; Looms—Adjusted for seasonal variation, weighted average, Dept. of Commerce; Wholesale Dry Goods Sales—Adjusted for seasonal variation, three-month moving average, Federal Reserve Board; Average 1921-1926=100 for all indexes.

April Statistics Better

April statistics show that this is being done. The Wool Institute's cloth statistics show a decline in stocks, while billings have caught up with production. Wholesale dry-goods sales improved for the second successive month. This is offset somewhat by the fact that Easter came in April, and also by the fact that the loom activity index increased slightly during that month. The tendency, however, has been for the spread between the wholesale dry-goods sales index and the index of loom activity to become more favorable. Under these circumstances, manufacturers' margins are likely to hold up fairly well, even though the prices of wool cloth decline for another month or two.

Some grades of cloth have been marked up recently, and, although prices in the cloth market in recent years have followed rather than led the prices of the raw material and semi-finished goods, the recent increases will probably operate to check the rate of decline in the cloth price averages.



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AMERICAN ENKA RAYON

IMPORTED DUTCH ENKA RAYON
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CANNON YARNS

The Textile Trend

COTTON TEXTILE MARKETS: Cotton piece goods market continues to drift under the influence of lack of buying. Certain sellers look for improvement during June when the progress of curtailment is more likely to make itself felt. Other mill men cannot foresee any sustained betterment until next year. The latter claim that the greatest hope lies in building a strong foundation for 1931.

WOOL TEXTILE MARKETS

Wool goods orders, just before and since the holiday, have been fair. Duplicate business has been coming in steadily, with a tendency toward increased size for individual orders as well as in the total volume. Tropical lines are incomplete, but buyers have been around the market and have expressed interest; in several instances pre-opening business has resulted. Favorable comment was voiced by sellers regarding the plans for cooperation advanced by A. D. Whiteside at the meeting of the Wool Institute. Worsted yarns are firmer and slightly more active.

KNIT GOODS MARKETS

Heavyweight underwear market steady and knitters look for a quiet two months, followed by a decided increase in buying in August. Moderate call for summer-weight cottons and rayons. Outerwear continues firm, with sustained interest in bathing-suits and polo shirts and berets; fancy sweaters quiet. Good call for women's low-priced hosiery. Men's rayon half-hose active, but prices are soft; knitters complain of surplus of inferior half-hose on the market at buyers' prices. Buyers continue sampling dull-luster full-fashioned, but orders are light.

SILK TEXTILE MARKETS

Raw silk has dropped 33 to 37c., following a hectic week in which buying was restricted to bargain business; silk is now purchasable at unprecedented low levels, and no real improvement is in sight. Softening of Japanese market and indifferent domestic demand caused decline. Thrown yarn weakened in sympathy, the drop being followed by active buying. Spun silk firm, and buyers have placed considerable future business. Broadsilk tone improves; cutters buying for July and August. Increased confidence, due to fall buying was week's feature in rayon market.

No Trend in Textile Shares

Good Stocks Available at Low Prices on Dividend Uncertainty

BOSTON.

ANOTHER slow, featureless week in textile mill shares. At the Boston stock auctions 275 shares were sold, the only changes of importance being a gain of 3⅝ points in Merrimack Mfg. common and a decline of 2⅜ points to 8⅝ in York Mfg. on a sale of eight shares. In the New Bedford district there was a small movement in Pepperell from 98½ down to 97. Berkshire Fine Spinning Associates preferred sold at 63-65 with the common around 17. In Fall River mill shares the Lincoln sold from 12½ to 11¾ and the Flint Mill at 20.

The Bancamerica-Blair merger proposal covering a dozen fine goods mills, has loomed large in financial and mill circles during the week, but at time of writing the New York meeting of mill men and bankers had not taken place. As one explanation of the postponement of the conference of the various executives involved it is said that a special accounting of the mills named in the merger has not yet been completed.

Among the various rumors is a report that Edward R. Tinker, a former president of Chase Securities Corp. is to head the merger. A. W. Dimick of the Grosvenor-Dale Co. is mentioned for general manager and W. H. Langshaw of the Dartmouth Mfg. Co. as head of the advisory board. During the week Bancamerica-Blair Corp. announced the election of Robert C. Adams of the Equitable Trust Co. as a director and vice-president of the corporation. In some quarters it is believed that the merger when completed will be much larger than the present proposition covering 12 mills. Other mills are said to be under consideration, including a large fine goods group.

GOODALL NET SHOWS SLIGHT DECLINE

Goodall Worsted Co., Sanford, Me., manufacturer of Palm Beach cloth and other specialty fabrics, reported net profits after taxes of $226,680 for 1929 against $235,055 in 1928. During the last five months of 1929, however, the newly segregated security corporation had net of $71,341. Earnings of this textile company have shrunk rapidly in the past two years from the total (indicated by balance sheet comparison) of $1,563,284 in 1927, equal to $20.84 per share on the 75,000 shares of stock then outstanding. In 1926 profits were $1,316,679 or $17.54 per share; in 1925 $800,511 or $10.67 per share. As of July 31, 1929, the company reorganized segregating most of its security holdings, valued at $3,900,000, reducing the par value of its stock from $100 to $50, and issuing one share of Goodall Securities Corp. stock of $50 par for each of the 75,000 shares of Goodall Worsted Co. It is now revealed that of the securities, valued at $3,939,000 on Dec. 31, 1929, $448,271 was in stocks (mostly industrial) and $3,490,738 was in bonds, including $1,525,605 U. S. governments, $655,147 public utilities, $359,039 industrials, and the balance in railroads, federal land banks, and state, city and foreign government obligations. At the end of last year the two companies combined had current assets of $8,538,466 against current liabilities of only $31,872. This represented no substantial change from the 1928 figures of $8,499,450 and $23,932.

BIGELOW-SANFORD DIVIDEND

Passing of the Mohawk Carpet Co. $3 dividend recently focussed attention upon an unsatisfactory earnings situation. The fact that the common stock of the Bigelow-Sanford Carpet Co., listed on the Boston Stock Exchange, is selling around the year's low of 57½, compared with the 1930 peak of 80, suggests that the conditions dictating the passing of the Mohawk Carpet dividend are probably more or less general in the carpet industry. Bigelow, it will be recalled, absorbed Stephen Sanford & Sons of Amsterdam, N. Y., last year, paying $5,000,000 in notes and 73,350 shares of its common stock for the Sanford properties, increasing its outstanding common to 314,384 shares, besides which are 27,243 shares of preferred.

JULIUS KAYSER CUTS DIVIDEND

The executive committee of Julius Kayer & Co. has recommended to directors, and subsequently approved by directors, that the annual dividend rate be reduced to $2.50. The stock at present is on a $4 annual basis. Directors will meet July 2 for dividend action. President Van Praag states earnings for the year ending June 30, 1930, will be somewhat in excess of $3 a share on the stock. For the year ended June 30, 1929, the company reported net income of $2,810,268 after depreciation, interest and federal taxes, equal after employes, and preferred dividends to $8.56 a share on the 322,747 shares of no par common.

YORK MFG. TAX REBATE

The committee of the tax assessors and mayor of Saco, Me., has adopted a resolve that the tax of York Mfg. Co. for 1930 be approximately $42,000, and further that the 1929 tax be discounted 25% to settle the tax for that year. The matter of taxes has been the one point holding up offer of New England Industries, Inc., for the company and the current resolves are in line with the company's wishes. The offer of New England Industries to York stockholders calls for exchange of one pre-

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IF you are now using du Pont Lolustra yarns, you may want to explain to your customers just why it gives such distinctive tone to your fabrics. Tell them it's the double glow! One glow is born within the yarn . . . like sunlight coming through a piece of Lalique glass. The other is a mobile surface glow. . . constantly changing . . . always permanent.

Du Pont Lolustra Rayons never lose their low lustre. This tone is made in the yarn . . . not painted on to wash away.

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THINGS WE ARE PROUD OF

THAT du Pont Super Extra yarns are now being used in one of the season's smartest fabrics . . . spiral crepes.

•

THAT no one has caught up with us in the matter of packaging. Everybody knows that du Pont's scientific put-ups save money for mills.

•

THAT du Pont is far ahead in the making of fine deniers. This fact gives us leadership in the new trading-up market.

•

THAT Lolustra is being used successfully in full-fashioned hosiery.

ferred and one-fifth of a share of common for each share of York common stock. The highest offer that York has previously been able to obtain for its physical property was $250,000, which with net assets, would mean a liquidating value of not exceeding $15 per share less the necessary court expenses, etc., and that only after delay.

Stockholders of the Berkshire Fine Spinning Associates, have received a quarterly dividend of $1.75 per share on their preferred stock. Concerning the passing of the dividend on the common stock the company states that current earnings fell off and it is desired to conserve resources and protect the strong asset position of the company.

BOSTON STOCK AUCTIONS

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
27	Associated Textile	...	35–36½	....
22	Amoskeag, pfd. (old stock)	100	65½	—2
44	West Point	100	100	—3½
35	Naumkeag	100	84–88	....
93	Hamilton Woolen	100	40	....
8	York	100	8¾	—2¾
20	Merrimack Mfg. com.	100	54	+3½
5	Richmond Lace	100	8	....
21	Whitman Mills	100	7½	+ ¼
5	Plymouth Cordage	100	82	— ½
280	Total			

FURTHER DECLINE IN SOUTH

CHARLOTTE, N. C.—A decline of 96c. was registered in the average bid price of 25 common stocks of southern cotton mills for the week ended May 31, according to figures released by R. S. Dickson & Co. in their weekly summary of textile shares. The closing bid price of the group stood at 75.96 as compared with 76.92 for the previous week. Trading was relatively quiet throughout the month, and a net decline of $3.20 was recorded for the four weeks.

Burlap Trading Lags

Burlap futures on the exchange at mid-week continued dull. Buyers' and sellers' price ideas were unchanged. The actual market was quiet.

The 8 oz. 40s for spot and afloat were 5.25-5.35c.; June shipment, 5.30c.; July-September shipment, 5.35c.; October-December, 5.45c. The 10½ oz. 40s for spot and afloat were 6.60-6.85c.; June shipment, 6.75c.; July-September, 6.85c.; October-December, 6.90c.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended May 31, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows:

Domestic	5,767,000	45,510,000	38,300,000
Foreign	1,512,000	39,973,000	65,098,000
Total	7,279,000	85,483,000	103,398,000
IMPORTS AT PRINCIPAL PORTS			
Boston	1,512,000	39,973,000	65,098,000
Philadelphia	863,000	27,199,000	38,064,000
New York	506,000	25,065,000	38,458,000
Total	2,881,000	92,237,000	141,620,000

Cotton Yarn Prices Sagging

Competition for Small Available Volume of Trade Forces Reductions

PHILADELPHIA.

DEMAND for yarns of all varieties is dull, and, notwithstanding curtailment among spinners more drastic than previously noted, the price situation in selling centers is no stronger. The market is continually weakened by spinners who are so anxious to book enough business to last them for the next week or two, that they cut prices recklessly. Although several, including mercerizers, report larger specifications on old contracts, the change for the better has not been widespread.

There is comparatively little yarn being carried by manufacturers in their warehouses and active numbers are at a low level. In numerous instances manufacturers are holding supplies of yarns in counts no longer required for their goods, and such odd lots are causing the market to drag more than it would under its own weight.

Yarn supplies in spinners' hands are reported not excessive but adequate. They have not piled up large inventories, but are shipping bulk of current spinnings based upon their low rate of spindle activity. The large stocks are being carried by local dealers and for this they are not to blame in a majority of instances.

DEALERS' STOCKS LARGE

Manufacturers have placed business with them on which they are refusing to accept delivery required in contract. Yarns on such contracts which are shipped by spinners and not accepted by the manufacturer, are piling up in dealers' warehouses and are larger than many dealers have carried in their history. These stocks must first be liquidated to manufacturers before there can be a decided improvement fundamentally in the sales yarn situation. Yarns in this position have been financed by the dealer who in unfavorable markets seen during the last two months has proved a substantial buffer for both manufacturer and spinner.

Several southern power companies have made the announcement that spinners will not be charged with minimum rate during the next two months and for this reason many spinners will curtail more than before. If the minimum rate had been left effective, many would have run two or three days a week in order to decrease losses, but, with minimum power charge removed, they will be free to close their plants if they so desire.

QUOTATIONS ARE EASIER

There has been continual sniping at the spinners' price level and sales made here have in most instances been a full cent under the quotation level. For example, spinners are quoting 30s-2 warps at 33½c., a few taking 33c., but sales have been reported in fair-sized quantities at 32c. This week one dealer is offering 30s-2 of unknown quality at 31¾c. This sagging price trend is result of poor demand over a long period and will continue until a bullish incentive makes itself felt.

In spite of the lack of satisfactory demand a few dealers have succeeded in making fair-size sales, the largest being 25,000 lb., calling for 26s cones at 31½c. for summer delivery; 10,000 lb., of 20s cones were moved at 29c. calling for better than average grade yarn; in weaving yarns, sales have been made at 32½c. for 30s-2, none being lower than 32c.

There has been no distinction between weaving and knitting demand, both being dull. Knitters in New York and Pennsylvania are reported to be operatating at 50% capacity and in view of this their yarn buying is small. Trading during May was about half of the same month a year previous, and about three-quarters of the volume for May two years ago. This indicates that compared with last year, when trading was active, sales average only 50% but give a more favorable appearance when compared with 1928.

●

NEW YORK—Carded cotton yarn trading shows an improved tone, although actual business is still somewhat backward. For several weeks there has been a gradual increase in the amount of inquiry received, with a slight additional growth in the volume of transactions. To all appearances, buyers are fast approaching a point where additional sales of their finished products will necessitate placing yarn commitments. Stocks of yarn in consumers' hands are judged to be at a minimum due to heavy curtailment of purchases for many weeks.

Uncertainty about raw cotton and yarn prices has been a main reason why more business has not been placed. No one can be certain of the future course of the cotton market, but dealers feel that as soon as buyers believe that the yarn market has reached its low point, purchasing will turn more active. For weeks, the market has had an easier tendency. This downward price trend has become less apparent recently and quotations seem to be hovering around the same level. Another few days of this, say sellers, and orders for medium sized

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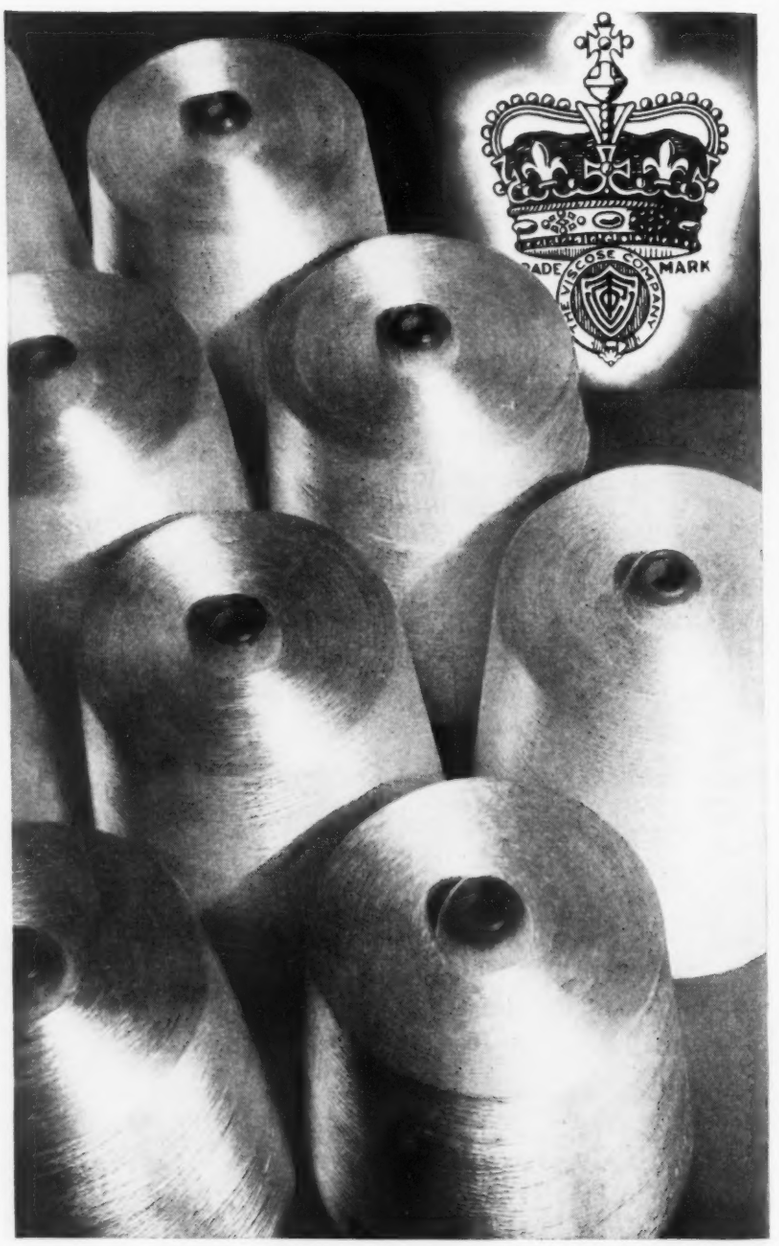

THE VISCOSE COMPANY
171 Madison Avenue New York City

quantities will most probably be placed.

Insulators have made inquiries for fair sized lots and those interested in the export end tell of increased interest from foreign sources.

•

BOSTON.—The month in cotton yarns opens with little visible change for the better. May was featured by the poorest volume business of the year and a general though restricted shrinkage in prices. As there is a general feeling that raw cotton will work to a lower level, yarn prospects are not particularly bright for the near future.

Cotton yarn dealers locally report a slightly better business than in the preceding week. Inquiry is somewhat broader, call for shipments more active and with the exception of the price situation conditions reflect a slight improvement. Inquiry in the market this week was fairly well scattered among the various trades, with weavers and braiders showing perhaps a little more interest than other users. Wire coverers, while not placing much new business, are taking in fair quantities of yarns ordered some time ago. The most inactive spots at the moment include the underwear trade and that portion of the worsted trade using cotton yarn in connection with their fabrics.

The slight improvement this week is not a sufficiently important factor to indicate the trend for the next four to six weeks. Prices are very unsatisfactory due to the condition of the textile business generally, and low quotations offer at this time no particular inducement. The weakness is about evenly divided among the sellers who shade commissions and the smaller spinning plants. A majority of spinners have held firmly to previous asking prices and have not contributed in any way to reduction in market quotations. Consumers have now held up new business long enough to make the matter serious for some yarn mills.

Buyers still insist on hand-to-mouth purchasing though they have but little stock yarn ahead, as proved by the fact that urgent requests for shipments are being made with each order booked. While some spinners have a little stock on hand, most of them have avoided accumulations, preferring to reduce operating spindles. Interest of weavers was largely in coarse and medium numbers with little attention to fine counts. are not in so fortunate a position and are running on reduced schedules. Leading mills, comparatively few in number, are running fairly well, but the rank and file needs business badly. The heavyweight season to date has been slow, and, with exception of one mixture spinner, all state that demand for yarns has been considerably under that for the 1929 heavyweight season.

SMALL STOCKS APPARENT

The bright aspect to the sales yarn market is undoubtedly found in the smallness of stocks in manufacturers' and spinners' hands, being smaller than in any previous period of dullness. The fact spinners have been curtailing drastically is seen in machinery activity statistics released by the Department of Commerce which show a 30% decline in spindle activity as compared with a year ago.

Showing of new dress goods lines has not resulted in placing of large yarn orders with spinners. This business will go to a small group who are able to produce the finest counts being used by these manufacturers in an attempt to merchandise a fabric that will prove more popular than in recent years; 60s and 70s are widely used in the new lines. There has been little yarn taken by dress goods mills for months and any improvement here would prove of inestimable value to the sales yarn situation.

Worsted Yarns Are Steadier

Outerwear Yarns Attract Better Buying as Knitters Cover for Fall

PHILADELPHIA.

FIRMNESS in the raw material market is causing more activity in yarns, outerwear spinners reporting the most active trading for two months; men's wear mixture spinners state they have not noted any change for the better. The situation as a whole presents an improved appearance and more buyers are ready to take yarn, which is urgently needed for immediate consumption, stocks all along the line being at a minimum.

There has been no change in quotation level although spinners, especially of outerwear counts, are compelled to pay more when they need additional wool. There is little margin for them since these counts are selling at $1.07½ for 2-20s, 50s, best grade yarns, with other varieties offered at $1.05 or even less. More manufacturers have bought outerwear counts, most of yarn being wanted right away, but there has also been a volume taken by spinners that will be delivered several months ahead.

OUTERWEAR CONTRACTS PLACED

This buying has been larger and for delivery further ahead than has been seen for many weeks. It was stimulated by the firmness in wools, although in several instances spinners believe it would have come anyway as much fall merchandise in knitted outerwear is ordered for delivery to begin the latter half of July, and this does not give the manufacturer and spinner a great deal of time.

There has been a fair volume of single yarns for fall delivery sold during the last two weeks, going to manufacturers of light-weight sweaters, demand for yarns of this type for bathing-suits is declining as season nears end.

Infants' wear has been moving more rapidly. This has had an effect upon yarn buying by manufacturers. Spinners report an expanding interest during the last two weeks, which gives the appearance of continuing for some time. Manufacturers find a larger number of buyers of this type merchandise in New York than at any previous time this year.

While outerwear interest has been expanding, the opposite has been true of men's wear sales, yarn buying by this trade diminishing rather than improving. Indications are men's wear mills have come to end of the orders they booked slightly more than a month ago, and until new ones are received yarn buying will be curtailed.

One manufacturer here is running day and night and it is reported he has orders in hand to permit him to continue on that basis for some time. Others

◆Spun Silk Market Steady

BROADSILK mills are placing both spot and future orders for spun silk yarn, but none of the contracts are large. Shantungs are still a big factor in broadgoods sales, weavers say, and they are calling steadily for 60/2 for the production of this line. Spinners note a slightly increased interest in 62 singles, also from the broadsilk trade.

Knitters are not buying. Spun silk prices continue firm, and the tone of the market is good. Sales are less than last week, and are expected to show the normal summer decline for the next two months. However, there is no sign of let-up in the consumer interest in shantungs, and spinners believe this will bring a moderate call for 60/2 for some time.

MEN'S WEAR SLACKENS

With the season now closing, spinners have every reason to feel satisfied. Spun yarn is in decidedly a better position than the other divisions of the silk industry. Considering the industrial depression, spinners fared well, thanks largely to the success of "Sports Silk Week," which stimulated demand for yarn, and brought shantungs to the foreground among the season's broadsilk fabrics. It is still too early to gage

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the sales of the first half-year but spinners expect them to be substantially ahead of last year.

◆ Throwsters Confident, Despite Price Drop

THROWN silk prices have declined 20 to 40c., due to the drop in raw silk quotations. Throwsters report a spotty call for canton crepes from broadsilk mills, and numerous inquiries for crepe and grenadine twist yarns from hosiery mills. Despite all the promotion of dull-luster hosiery, the actual yarn business represented by this vogue continues small. Throwsters are going ahead cautiously now in their output of the crepe and grenadine twists. There is no weakening in the belief that the dull-luster hosiery has a future and that it will stimulate the demand from knitters for the broadsilk yarns, but the thrown silk producers feel this development will be slower than first expected.

The cut in yarn prices has had the usual effect of stimulating demand, but there is also some non-bargain business being placed, throwsters say. Paradoxically enough, considering the raw silk situation, the thrown silk market is more confident this week. Consuming industries show increased interest, and manufacturers are beginning to feel out the yarn market, regarding fall contracts.

Rayon Selling to Sept. 1

Trend to Future Coverage Improves Tone of Market

THE growing confidence in industry regarding prospects for fall, is having the expected favorable effect on the rayon yarn market. Demand to cover nearby needs has eased off, as is usual at this time of the year, but both knitters and weavers have begun to cover for fall. Several producers report writing future orders; none of this business is large, but it is considered significant as indicating increased confidence.

One of the foremost rayon companies received considerable future business this week, some orders as far ahead as Sept. 1. The bulk of this demand came from broadsilk and cotton weavers. No sudden jump in future coverage is looked for, but the fact that this business has begun has had a strengthening reaction on the market. Producers now are fairly satisfied with the outlook; they receive encouraging reports from consuming industries regarding August-September prospects, and the general feeling is that the normal June-July lull will be less pronounced than usual.

HOSIERY MILLS BUYING

Current buying is divided between knitters and weavers. There has been a light but steady call for 100s, 125s and 150s for half-hose production, and broadsilk mills are buying the finer sizes for rayon flat crepes. Rayon flat crepes continue to move well, these weavers say, and while they are not ready to venture future coverage on yarns, they are placing considerable spot business. Rayon half-hose is in a better position than previously thanks to the effort put forth in getting new attractive designs. Current rayon half-hose offerings include some pleasing numbers which have been well-received at the retail end. Half-hose mills are buying yarn steadily, but always on a week to week basis.

Producers complain that the continued interest in inferior yarns for the production of rayon broadgoods is holding back the sale of standard quality yarns. There is still an active turnover in inferior rayon at 80c., and despite the limited output of this yarn, mills manage to get all the stocks they want. Producers are patiently waiting for the stocks of inferior to get down to normal, so that weavers then will buy regular lines of yarn which, the producers point out, will have a favorable effect on the market generally as the continued production of inferior rayon broadgoods is prejudicial to the reputation of synthetic yarn fabrics in this field.

◆ Spinning Waste Slow; Threads Firm

BOSTON.

BUYERS continue hand-to-mouth operations in spinning stocks and until the price relations between old and new crop quotations are ironed out either by near months falling, or future months rising, it is quite unlikely that any large buying ahead will be seen, even though holders of good wastes were willing to make decided concessions. Market movement covers the several strips and combers, while in the flat-priced stocks a decided lack of interest is seen.

Of fundamental import to the trade is the fact that contractors are taking in supplies of material on current cotton basis which is considered artificially high while on the other hand consumers, particularly with a view to the future requirements, are under the influence of the belief that the real value of cotton, and consequently of its wastes, is indicated more accurately by the prices at which cotton is quoted in the new crop months. Sellers of spinnable wastes have this to contend with, and while they refuse to move far away from actual cotton prices in determining the prices at which they will sell their holdings, they are nevertheless in most cases unable to make profitable sales in view of the bearish attitude of consumers.

THREAD WASTES FIRMER

Threads which have been neglected for year to date, with prices rather out of the line with other wastes, are now showing improvement according to some men handling these materials. Machiners are showing more interest and both white and colored threads are sold in larger quantities at firmer prices. There has been a general, though irregular, decline in spindle activity for year to date, and this of necessity means a relatively curtailed output of thread waste. Spindle activity in the country as a whole in April was 96.3%, for March 92.8%, for February 79.7%, for January 100.3%. In April a year ago spindle activity was 110.3%.

DECLINE IN FOREIGN TRADE

The cotton waste trade in addition to restricted domestic consumer buying for year to date has receded to a marked degree in its foreign business. Boston has suffered more in this respect than either Philadelphia or New York.

Exports of wastes show a decrease from 15,286,000 lb. in the first quarter of 1929 to 12,460,000 for January-March this year, a loss of 2,826,000 lb. The trade is expecting that the foreign business for the second half of 1930 will be more satisfactory.

◆ Wool Waste and Rag Imports Decline

BOSTON.

THE wool waste market continues dull for this period of the year. A number of wastes are moving in small quantities. Colored materials are easier in price. These commodities are not sustained by any possible tariff action because for months, if not years, the Bradford market on colored wastes has always been nearer the white market than is the case in Boston. There is some garnetting going on in threads in anticipation of mill call in the near future. The price of fine white thread is around 63c.

Interest in wastes is broader. Mills are making more inquiries which at times result in orders. Handlers of wastes, more encouraged over the situation as developing, are sounding out producing mills with the object of acquiring additional supplies. The market in general will be greatly relieved when the tariff situation is settled decisively. Importing houses are showing no interest whatsoever in the foreign market at the present time.

BRADFORD AND DEWSBURY MARKETS

In the Bradford market there is no increase in the exporting business so far as Boston is concerned. Trade with

FASHION steps forth in the newest smart stocking . . . no seam on the graceful leg or small trim ankle . . . no seam under the smooth snug foot or on the narrowed fitted "Gussetoe."

A stocking of exquisite sheer . . . shaped and fitted in the knitting . . . always elastic

No seam to twist or mar the leg's sheer shapeliness.

The "Gussetoe"... narrowed and formed ... the smooth foot ... with no seam or ridge.

. . . sleekly smooth. The stocking from the new Model K machine.

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the Continent in types of fine wastes for garnetting has been on a higher basis than similar wastes consigned or sold to Boston. Buying is still very cautious.

Total imports into the United States of wool waste for the first quarter this year showed no such increase as generally believed would be the case on the prospect of a much higher duty in the new tariff for these commodities. Imports of January-March were 996,000 lb. compared with 1,098,000 in the first quarter of 1929. Throughout the entire year of 1929 wool waste imports were declining, the full import 2,847,000 lb. as compared with 4,678,000 for 1928.

Slump in Rag Imports

Total wool rag imports into the United States for the first quarter of the year show a large decrease of 36% as compared with the similar period of last year. Import for January-March of this year was 4,449,000 lb. at an average value of 27.7c. as compared with 5,620,000 by 28c. in 1929.

◆Fine Noil Position Fully Maintained

Boston.

NOILS ended the month of May in a dull market. Business for the month was in moderate proportion only and yet prices kept up quite firmly. A leading noil house quoted month-end prices as follows: Fine noils, 57 to 60c.; half blood, 53 to 55c.; 56s, 45 to 48c.; 50s, 44 to 46c.; low quarter, 40 to 42c.; fine recombed colored, 46 to 48c.; medium recombed colored, 40 to 42c.

Domestic output is not showing any expansion and is still running largely to merinos. Crossbred qualities are in no large stocks, and there has recently been some woolen mill interest shown. Colored noils are quite dull and for rayon and silk noils the demand is not enough to satisfy dealers. Camelhair noil, the most active of the specialties, as well as the highest priced with the exception of cashmere, is rarely traded in on the street.

Noil Imports Slump

Large consumption of fine noils during the first three months of the year averted what promised to be a decided break in noil values. Stocks are approximately normal for this time of the year. It is of interest to note that imports of noils for the first quarter of this year were very much below the average, in spite of a much higher promised rate of duty written into the revised tariff bill. Imports of noils throughout 1929 were on a declining scale, the total for the year being 6,002,000 lb. as compared with 8,499,000 in 1928. Imports for the first three months of this year slumped to a low figure of 797,000 lb. which may be compared with 1,980,000 in the first three months of 1929.

Month-end advices from Bradford state that recent business has been restricted but that quotations are firm owing to small stocks. The Continent is not buying freely and the recent buying for American account has ended.

◆Rayon Waste Prices Softer

DEMAND for rayon waste is still spotty, and prices of certain numbers show a softening trend. The woolen and fiber industries bought hesitantly all week; the top-makers and the worsted trade placed little or no business. Waste dealers look for no real improvement before Aug. 1, though improvement in demand from the woolen industry may register sooner than that. There is a moderate call for waste for automobile plush manufacture, but buying by these firms is light and uneven.

Rayon waste prices continue nominal. Bleached thread waste, which is quoted at 14 to 15c. for manufacturers, was selling at 10 to 12c. Open bleached also weakened slightly, falling from 25 to 22c. There is little change in stocks; New York firms have a fair amount of good quality waste on hand.

Cotton Market Sags

Trade Expects Favorable June Crop Reports

UNFAVORABLE features in the progress of the cotton crop during May were not sufficiently serious, apparently to create any general anxiety over the outlook. Since the beginning of June the weather has been more favorable, but June improvements frequently prove ephemeral, and selling has not become really active or aggressive. Nevertheless, with the passing of the May contract, the markets have become more responsive to ordinary news factors, and prices have sagged off under the influence of the better weather and continued poor trade accounts. The old October contract sold off to approximately 14½c. toward the end of this week. It had sold up to 16.15c. during April on the strength of the near-month situation, had reacted to 14.79c. on the mid-May decline, and almost immediately recovered to about the 15½c. level. Other months showed similar reactions, but, as is usually the case, June declines are attracting more or less buying in anticipation of crop scares during July and August.

Old Crop Not Yet Liquidated

The old-crop situation, of course, has not been fully liquidated. July premiums have diminished with the slackening of the tension after the record-breaking deliveries on May contracts, but July is still selling more than one cent a pound above the old October contract. There is uncertainty as to the remaining holdings of the cooperative organizations which are financed by the Farm Board, but if their original holdings of May and July combined were in the neighborhood of 750,000 bales, as is generally supposed, it would seem that their remaining interest in July contracts might be somewhere in the neighborhood of 150,000 to 200,000 bales.

There are now about 665,000 bales of cotton in the certificated stock at designated delivery points and Savannah. Interests representing the cooperatives are said to hold about 576,000 bales of this supply taken up last month, leaving about 89,000 bales which may possibly be free for delivery in liquidation of July hedges if necessary. Nevertheless, the getting together of another 20,000 bales or so of tenderable cotton for the protection of July contracts may not be an altogether simple matter, and the approach of the first July notice day toward the end of this month is likely to turn the trade's attention, temporarily, at any rate, back to the technical position of the old crop.

At the beginning of May, crop advices from the South suggested that the season was slightly ahead of normal. Owing to the unfavorable May weather, including excessive rains in western and central sections of the belt, and low temperatures, the crop has been delayed, and at the beginning of June it is probably several days behind normal. The beginning of this month also finds considerable replanting still to be done, but there has been little change of sentiment as to the acreage, with estimates of the probable decrease as compared with last year, ranging from about 2 to 4%. With good weather during June it is anticipated that the crop will come up to the critical months of the season with very favorable conditions, and there is yet no reason to anticipate that ultimate yields will be either materially above or materially below an average.

Mill Consumption Slow

In the meantime, reports from dry-goods and manufacturing centers would certainly point to no expansion of mill consumption during the balance of this season at any rate. According to some authorities, domestic mill curtailment is likely to be greater during June than it was during May; and nothing like normal conditions are to be expected in Manchester, while affairs are so unset-

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fled in India and the low price of bar silver is depressing the China exchange.

●

MEMPHIS, TENN., June 2—The cotton market here is still extremely quiet, with no indications to suggest when a revival may be expected. Owing to the absence of definite basis and the small volume of business passing, some say a market no longer exists. It is perhaps not far from the fact to say that buyers do not know at what price cotton can be bought until they have made the rounds of the market for any description wanted.

Reported sales are running about half what they did at this time last year. This is accounted for in part by the fact that most of the bread and butter cottons were accumulated in one or two merchant stocks prior to the turn of the year, and for the last two or three months merchant competition with first hands has been sharp. Dullness is more apparent in connection with new crop business than with orders for immediate or nearby shipment.

The fact that the cooperatives are sticklers for price, whereas merchants have been accustomed to operating on basis, has immensely complicated matters; so much so that merchants are disposed to be extremely slow to enter upon commitments, except at very high basis, until they can see in what way, if any, they will have to adjust themselves.

The official quotation on premium staples has been reduced 25 to 50 points but is still above the basis being paid. A few sizeable lots are being held for full prices.

Cotton made rather poor growth during the week, due to cool nights, but weather conditions were favorable for field work, which made good progress. Stands are good and unless another wet spell develops the crop is now safe from getting in the grass.

●

BOSTON.—Slow business in the fine goods mills is restricting further purchases of suitable cottons. Prices on raw materials during the week moved on a limited range but both domestic and foreign buyers continued indifferent. Demand for extra staples as well as for selected shorter staples fell off during the week. Raw cotton needs are being covered with great caution, and strictly on a hand-to-mouth basis.

Domestic mills are proceeding with the curtailment program for the reason that sales still are somewhat below current output and that prices are showing no trend toward improvement. They are covering only immediate needs and are trying to buy at prices that do not appeal to owners of cotton. Spinners, as a rule, are bidding prices sharply below those asked by shippers who are in position to enter into transactions of this character.

The local Egyptian situation has been upset by the heavy imports recently made in expectation of the passage of the tariff bill. Unless there is a vast improvement in the world's taking of cotton during the next 18 months it looks as if huge stocks would remain with the Egyptian government and hang over the markets for an indefinite length of time.

Exports of cotton for this season show a decrease of 1,158,000 bales, British imports declining about 30%. Relatively large stocks of cotton held in the United States are to some extent offset by the smaller European stocks of American cotton, and although this season the world has consumed heavily of outside growths, unless India and Egypt maintain the production of bountiful crops, users may be compelled to revert to the lower American varieties in larger quantities.

Wool Moves to Firmer Position

Resistance Meets Low Bids, And New Wools Are More Active

BOSTON.

THE wool market seems to have a fairly strong undertone, but the situation on the surface continues to show some unsettlement of opinion which displays itself in the low prices bid by mill purchasers on the merino wools in which they show a steady interest. Prices are generally unchanged from a week ago, but the market is broader than it was. Manufacturers are showing inclination to buy a little more freely, although it cannot be said that there is any evidence of their intention to purchase much wool ahead of their immediate requirements. Fine wools in the original bags have been relatively active for several weeks on a range of 70 to 72c. Half blood combing wools have also been in better demand, but values have shown no change for the better.

The demand for fine wool in original bags is still the main feature of the Boston market. The topmakers who have been inactive of late are now taking fair-size quantities of wool as they arrive in Boston.

MFG. POSITION IN APRIL

Wool manufacturing in April was featured by steadiness of operation in the woolen branch and a further limited recession in worsteds of about 4% in which worsted spindle activity showed a decline of 6.6% from March. The woolen division of the industry, based on its cards and spindles, was 79% of the base year of 1926 taken as 100, while the worsted division based on its combs and spindles at 71 was at the low point for years. Wool manufacturing in both branches for concerns reporting, about 95% of the industry, was 51, compared with 52.3 for March, 75.1 for April, 1929 and 100 for the year 1926.

WOOL AT HOME AND ABROAD

The wool trade is still engaged in contracting for supplies of the new clip, and, until further progress is made both by independents and the cooperatives, the general wool situation in the United States is most likely to continue to play second fiddle to the strong and active markets in foreign centers. Wools in the Boston market are on the low level of the year. All kinds of guesses are made as to the actual amount of wool placed under contract for year to date. It is questionable whether an individual or any single organization knows within a number of millions the amount actually tied up.

The raw wool market outside of the United States has experienced a remarkable change in recent weeks and the recovery in values as well as the large increase in buying interest has developed a feeling of confidence in the general soundness of the wool position. The wave of depression carried prices far below their true economic level, so far indeed as to create a semi-panic in important wool centers of Australasia.

Raw Silk Hits New Lows

Market Reflects Japanese Weakness—Prices Off 33 to 37c.

A SHARP weakening of the Japanese markets has combined with a lack of serious buying interest here, in sending raw silk prices down to unprecedented low levels. Trading before and after Decoration Day week-end was active, but was on a strictly bargain basis. The extreme softness in raw silk quotations may be gaged from the comparison figures in the Silk Exchange table which appears elsewhere in this issue. During the week covered in the

Practically any full-fashioned knitting machine will make money for its owners in a seller's market . . . In a buyer's market production must be more precise, more economical and up-to-the-minute in style . . . That is why the majority of successful stocking manufacturers have selected—

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TEXTILE MACHINE WORKS, READING, PENNSYLVANIA

table, prices registered a fall of from 33 to 37c.

The outlook at present is dubious, to say the least. Importers find some comfort in the theory that prices now have hit bottom; however, this belief was expressed when figures were considerably higher, and there is no assurance that further weakness will not develop.

One favorable factor is the drastic curtailment of imports. Figures compiled by the Silk Association of America, Inc., place the total stocks in this country June 1 at 35,477 bales, as compared to 53,704 on May 1. The domestic stock of Japanese raw silk June 1 was 26,189 bales, against 39,704 on May 1. Importers are hopeful that this reduction eventually will serve as a brake on the steady decline.

These curtailment figures are particularly significant, in contrast with the figures which show that May deliveries to American mills totaled 40,823 bales, only slightly less than April, when 41,584 bales were delivered.

Worst Drop of Season

The price drop stimulated broadsilk mills to do considerable buying, but this pick-up in demand failed to rally the market. Viewing the present weakness—by far the most serious weakness of a weak season—several explanations suggest themselves. The probable truth is that they all combined to soften the market. Raw silk demand normally tapers off at this time of the year, and except for cases where bargain buying is possible, the manufacturers are averse to placing business, which naturally sends prices downward.

Another element is that the Japanese filatures have been pushing sales to effect quick turnover, in order to finance their purchase of cocoons for the new season. Cocoon prices are unusually low, which gave added incentive to the price-cutting by filatures. The Japanese markets are heavily overstocked, and prices there fell so low last week, that even the policy of curtailing imports failed to halt the decline in the New York market.

Free Market in Japan

The situation is further aggravated by the fact that the raw silk warehousing plan in Japan has reached its maximum limit of 150,000 boxes under the plan. Although the warehousing law in Japan is in effect until June 10, the plan is now inoperative by reason of warehoused holdings having reached the limit, and there will henceforth be a free market for raw silk.

Price Rules in Half-Hose

Trade-Down Trend More Pronounced, Mill Men Say

HOSIERY demand continues spotty. Certain of the low-priced lines of women's goods are moving more actively; mill agents report a fair call for delustered rayon seamless made to retail at 50c.; even at this figure, however, agents have difficulty at getting their quoted prices. Full-fashioned silk chiffons register a slight improvement; not all the clearance merchandise has yet been disposed of, but prices are firmer and jobbers and retailers are less disposed to bargain.

The week brought little change in the dull-luster hosiery situation; buyers continue sampling, and moderate sized orders are being placed, but there is no rush at the retail end. The granting of a crepe-grenadine twist patent to one hosiery firm has bewildered knitters as to the legality of their plans for production of stockings made from the broadsilk yarns; the trade now is awaiting the developments which may ensue following the decision of the National Association of Hosiery and Underwear Manufacturers to put the matter in the hands of a patent attorney.

Price Dominates

Half-hose is more active, and there is less pressure to clear. Lines made to retail at 25c. and 50c. are in demand. However, the tone of the market is still weak. Jobbers and retailers buy on a strictly price basis. Price is more important than quality, mill men say. The price element has been stressed so much that now nobody really knows what he buys. There is an abundance of inferior half-hose on the market. Knitters attribute the present situation to the consumer's insistence upon low prices. Plenty of quality half-hose which is poorly designed and poorly made hose which is attractively designed are available. The point is, with prices so low, mills are unable to give quality in both fabric and design and they forfeit one or the other, to enable them to meet the market.

The result of this trend is to kill the volume business in 50c. half-hose, one knitter observed. This factor finds his best business at present in the 35c. numbers which retail at three pairs for one dollar. These are spiral effects, neat, quiet designs and conservative colors; most of them made of rayon and Celanese.

Outlook Hazy

The outlook in the half-hose field is hazy, to say the least. Price-cutting in recent months has trained both trade buyers and ultimate consumers to paying lower prices, with the result that the whole half-hose industry is in the grip of a trade-down tendency. The knitters are more confident than they were last week, but the situation is very unsatisfactory. Standard means little to the hosiery buyer, just now. The sock which last year sold for $3.00 per doz. now is available in an inferior grade at $2.10, and so long as the price is kept down, the buyer appears to be satisfied.

Knitters see little prospect for early improvement. The price weakness is gradually eliminating the weaker mills, but this probably will not bring much relief as these firms' machines will get into the possession of other mills and the latter, encouraged by bigger output will cut prices once more to rely on volume for their profit. It is an endless cycle.

Outerwear Continues Active

Many Bathing-Suit Duplicate Orders Placed

COOL weather has slowed up demand for knitted outerwear in the North Atlantic States, but despite the slackening there is still plenty of activity. Rayon polos and rayon berets continue to lead the novelties, and bathing-suit producers are at maximum pressure in making deliveries. Just prior to Decoration Day, bathing-suit mills received large reorders, one firm stating that it had sold 1,000 doz. in a few days. This week, bathing-suit demand is lighter, but a jump in temperature would soon stimulate buying once more.

It is now anybody's guess as to when bathing-suit business will begin to taper off. Normally, the season starts to wane at the end of June, but numerous Worth Street factors are convinced that business will continue active through July this year. It is largely a question of weather conditions. Usually, mills begin planning their 1931 sample output at the beginning of July.

Favor Plain Colors

Bathing-suit reorders stress high colors in women's garments, and they bring further confirmation of the belief that this is not a year for novelties. Jobbers and retailers are strong for such shades as orange, orchid, and maize, but these must be plain colors. Knitters repeatedly report instances where their lines are slighted, if the gay colors are combined with novelty effects.

LET THIS EXTRA REINFORCEMENT CLOSE THE SALE

DOUBLE extra splice at points of extra wear . . . The Banner Split foot NARROW EXTRA HIGH SPLICE and TRIPLE TOE attachment adds this extra merchandising feature to any "Split foot hose." And no loose ends nor ragged edge where silk instep joins reinforcement. Write for full information on this exclusive Banner feature. Price of attachment for machines now running gladly sent on request.

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PHILADELPHIA CHATTANOOGA HIGH POINT

Textile World Analyst

There is no sign of let-up in the call for rayon polo shirts and berets. Boys' polos in particular are moving actively, the demand being chiefly for brighter shades.

Knitters are puzzled by the slow movement of sweaters. A few firms are doing business, but mills as a whole report general dullness in even the most attractive of the summer lines. Lightweight sweaters are not doing so well as they did last year, and prices have softened as a result. So far, there is no real surplus on hand, but it seems pretty likely that unless demand picks up soon, there will be a real accumulation and mills will be obliged to cut prices to move stocks.

◆Heavy Underwear Stocks Are Light

THE extremely light stocks in the hands of both jobbers and retailers leads producers of heavyweight underwear to look for a sharp pick-up in demand in August. Several mill agents predict that this will bring about a shortage; however, that will depend largely upon the developments of the next six weeks.

Demand for heavyweights is light at present, this being the normal quiet period. The lull is less pronounced than it was last year, buyers showing a disposition to place moderate business. Inasmuch as both the distributors and the mills have allowed their stocks to decline to a minimum, and as the mill men state positively that they will not increase output before August, indications are that there will be no great quantity of heavyweights available when fall buying starts.

If distributors buy lightly all summer, rather than drop off entirely as is usual, the pressure of demand in August will be proportionately less. The prospects at present are that June-July buying will be negligible, which would mean a sudden spurt later, bringing a stiffening of prices and the possibility even of an increase.

Current cool weather has kept rayon underwear demand down, though some mills are doing a fairly steady business. Cotton lightweights also have eased off. Balbriggans are steady.

◆Buying Disinterest Still Affects Cottons

SEVERAL cotton goods commission merchants look for better sales this month, but to date there is little sign of any improvement in demand. Other sellers are not so optimistic and believe that there will be no sustained betterment for the balance of the year. The best that they can foresee is that by curtailment and cautious merchandising, they can lay the foundations for a stronger market in 1931.

For some unknown reason, a few print cloth sellers had a spurt of business on the Thursday before Memorial Day. It had been thought that the short week would prove uninteresting, but this last minute business in certain quarters helped the sales volume considerably. Two things are noticed in print cloth buying generally. Deliveries are either wanted at once, or else customers are trying to buy for late fall, such as September or October. In the former case it is probably from those who have been out of the market for some time or who have been placing commitments very cautiously. The requests for late deliveries are thought to come from buyers who have been unable to work off stocks of goods purchased at higher prices and now are trying to even up.

Print cloth prices have shown a softer tendency, with more heard of the 5.35 yd. 64x60s at 5⅞c. This quotation was reported in first hands before the holiday, but was regarded as an inside. Lately, a few houses have openly quoted this for lots of 100,000 yd. or more. Similarly, fair-size sales of 64x60s, 7.60 yd. were reported at 4 15/16c. where previous trading had been at 4⅞c.

◆Whiteside Response Encourages Sellers

POST holiday wool goods business has been put in the background by an extent, by discussion of the meeting of the Wool Institute. More correctly, last week's meeting could be termed a meeting of the wool goods industry as the doors are now thrown open to member and non-member mills alike, for the purpose of coordinating activities for the betterment of all. The general selling market is heartily in accord with the principles advanced by A. D. Whiteside and many were surprised, as well as elated, by the interest shown in these various propositions.

Notwithstanding a short week, last week's business was slightly better than expected and to a considerable degree this carried over into the current week. Duplicates came in steadily with a tendency toward greater volume, both in the individual order and in the aggregate. As often stated, there is a wide variation in the experiences of those at the top of the heap and those at the bottom. The mills generally looked upon as market leaders, are either operating double shifts or else single shift full time. A few mills are sold into August and several more into July. Of the balance, many have a good quantity of business for this month, but will need a continuance of present buying to insure future operations.

The credit situation has not cleared up yet, and mills, as well as clothiers, are inspecting orders carefully before filling. While this tends to delay operations in some quarters, it is the safe policy to pursue.

Tropicals attracted a good deal of attention. Many lines are far from complete, but buyers have been around inspecting offerings. Hot weather, earlier in the year, served to clean out a lot of stock goods and this, coupled with the increasing interest in men's summer clothing, brightens up the lightweight clothing field considerably.

Broadsilk Futures Active

Market Tone Improves; Chiffon Prints Clearing

THE tone of the broadsilk market is stronger this week, thanks to increased interest in fall lines. Dress manufacturers are placing orders for August-September delivery; the call is mainly for plain canton crepes, with a secondary interest in canton crepe prints. Weavers are still producing cautiously, but they regard the fall with more optimism than they did last week. Reports from consuming markets on the fall outlook are encouraging, and the mills expect a slow steady growth in fall coverage through the summer months.

Weavers anticipate considerable fall business in cantons during the next few weeks. Numerous Pacific Coast retail buyers are due within ten days, and are expected to do their first fall buying then.

Chiffons Clearing Fast

Printed chiffons, now procurable at $1.00 for the most attractive numbers, are selling fast, and indications are they will be practically all gone by June 21. The demand is steady, and there is no extreme pressure on price. Mills are getting $1.25 for some of their most popular prints. Plain chiffons continue in demand at regular prices, and mills are short of certain colors.

There is no let-up in the call for shantungs. The week brought its usual quota of spot orders. Cutters have difficulty in getting some shades, particularly white; certain of the high colors also are scarce. Sales executives say they could handle considerably more orders if they had the stocks to fill them. These factors are now convinced that shantung demand will continue for most of the summer.

At the production end, mills are concentrating on their samples of fall lines. Sampling is active, thanks to the improved feeling regarding the industrial situation generally; dress manufacturers are more confident than retailers, at present.

QUOTATIONS

at close of business, June 4, 1930
Prices cover average qualities unless otherwise stated

Cotton Goods

	June 4	May 28	June 5 1929
PRINT CLOTHS			
27 -in., 64x60, 7.60.	4 5/16c.	4 5/16–4 1/2c.	4 1/2–5c.
38½-in., 64x60, 5.35.	5½–6c.	6 –6½c.	7½c.
39 -in., 68x72, 4.75.	6¼–6½c.	6½–7 c.	8c.
39 -in., 72x76, 4.25.	7½–7¾c.	7¾–8 c.	9½c.
39 -in., 80x80, 4.00.	8½–8¾c.	8¾–8½c.	9¾–10c.
BROWN SHEETING			
36-in., 56x60, 4.00...	7¾–7½c.	7⅞–7¾c.	8½c.
36-in., 48x48, 3.00...	8¼c.	9 –9¼c.	10½c.
37-in., 48x48, 4.00...	6¼c.	6¼c.	7¼c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70.	6¾–6¾c.	6¾–6¾c.	8¾c.
36½-in., 64x60, 5.75.	5¾–5¾c.	5¾–6 c.	7 c.
MISCELLANEOUS			
Drills, 37-in., 3 yd...	8¼– 8½c.	9c.	10½c.
Denims, 2.20.....	15c.	15c.	17c.
Tickings, 8 oz.....	18–19½c.	18 –19½c.	22–23½c.
Standard prints.....	9½c.	9½c.	9c.
Eastern staple ginghams, 27-in.....	10c.	10c.	10½c.

Cotton Waste

Peeler comber	12½—13
Peeler strips	11 —12
Sak. comber	11 —12
Choice willowed fly	6 — 6½
Choice willowed picker	5 — 5½
Sak. strips	14 —15
Linters (mill run)	3½— 4
White spooler (single)	9 — 9½

Cotton Yarn

(Carded yarn quotations are nominal)

CARDED—(Average Quality)
Double carded 2c.-4c. higher, according to quality

SINGLE SKEINS OR TUBES—(Warp Twist)

4s to 8s...	$0.25½	20s.....	$0.27½–.28
10s.....	.25½–.26	24s.....	–.30½
12s.....	.26 –.26½	26s.....	–.31½
14s.....	.26½–.27	30s.....	.32½–.33
16s.....	.27 –.27½	40s ex. qual...	–.45

TWO-PLY SKEINS AND TUBES

8s-2.....	$0.25½–.26	26s-2.....	$0.32
10s-2.....	.26 –.26½	30s-2.....	–.32½
12s-2.....	.26½–.27	36s-2.....	.38½–.39
14s-2.....	.27 –.27½	40s-2.....	.41 –.42
16s-2.....	–.27½	40s-2 hi b'k..	.45 –.46
20s-2.....	.27½–.28	50s-2.....	.50 –.51
24s-2.....	–.31	60s-2.....	–.57

SINGLE WARPS

10s.....	$0.26	24s.....	$0.30½–.31
12s.....	–.26½	26s.....	.32 –.32½
14s.....	–.27	30s.....	.34 –.34½
16s.....	–.27½	40s ex. qual...	.46 –.47
20s.....	.28 –.28½		

TWO-PLY WARPS

8s-2.....	$0.26	24s-2.....	$0.31½
10s-2.....	–.26½	26s-2.....	–.32½
12s-2.....	–.27	30s-2.....	.32½–.33½
14s-2.....	.27 –.27½	40s-2 ordin...	.41 –.42
16s-2.....	–.27½	50s-2.....	.50 –.51
20s-2.....	.27½–.28	60s-2.....	.57 –.58

8s-3 and 4-ply skeins and tubes; tinged, 21; white, 24½–25; waste, 20

HOSIERY CONES (Frame Spun)

8s.....	$0.25	22s.....	$0.29
10s.....	–.25½	24s.....	–.30
12s.....	–.26	26s.....	.31 –.31½
14s.....	–.26½	30s tying.....	–.32
16s.....	–.27	30s reg.....	–.33½
18s.....	–.27½	30s ex. qual...	–.36
20s.....	–.28	40s.....	.41 –.42

COMBED PEELER—(Average Quality)

WARPS, SKEINS AND CONES

TWO-PLY—(Mercerizing Twist)

20s-2.....	$0.43	60s-2.....	$0.62
30s-2.....	.48½	70s-2.....	.72
36s-2.....	.50	80s-2.....	.84
40s-2.....	.51	90s-2.....	1.02
50s-2.....	.54	100s-2.....	1.28

TWO-PLY—(Warp Twist)

20s-2.....	$0.44	60s-2.....	$0.63
30s-2.....	.49	70s-2.....	.74
36s-2.....	.51	80s-2.....	.86
40s-2.....	.52	90s-2.....	1.08
50s-2.....	.56	100s-2.....	1.33

SINGLES

12s.....	$0..37½	30s.....	$0.46½–.47
14s.....	.38	38s.....	.49 –.50
16s.....	.38½	40s.....	–.51
18s.....	.39	50s.....	.54 –.55
20s.....	.40	60s.....	.62 –.63
24s.....	.42½	70s.....	.72 –.73
28s.....	.45½	80s.....	.84 –.85

MERCERIZED CONES—(Combed, Ungassed)

26s-2....	$0.61 –$0.62	90s-2....	$1.40 –$1.45
30s-2....	.62 – .63	100s-2....	1.70 – 1.75
36s-2....	.65 – .66	120s-2....	2.10 – 2.15
40s-2....	.67 – .68	30s.....	.75 – .77
45s-2....	.70 – .72	40s.....	.80 – .82
50s-2....	.72 – .74	50s.....	.85 – .87
60s-2....	.80 – .82	60s.....	.90 – .92
70s-2....	.94 – .97	70s.....	1.05 – 1.07
80s-2....	1.07 – 1.11	80s.....	1.25 – 1.30

Cotton Prices and Statistics

COTTON STATIS CAL DATA
(Fluctuations of Futures)

	Closed May 22	For Week High	For Week Low	Closed May 22	Net Change
June.....	15.96	16.02	15.55	15.55	—.41
July.....	15.11	16.20	15.07	15.81	+.70
August....	15.61	15.70	15.10	15.10	—.51
September.	15.15	15.25	14.60	14.60	—.55
October....	15.11	15.22	14.53	14.56	—.55
November.	15.12	15.20	14.55	14.55	—.57
December.	15.14	15.26	14.61	14.63	—.51
January...	15.16	15.24	14.57	14.58	—.58
February..	14.98	15.04	14.38	14.38	—.60
March.....	15.07	15.14	14.47	14.48	—.59
April.....	.....	14.88	14.53	14.53	.....
May.....	.....	15.00	14.58	14.59	.....

MIDDLING SPOT FLUCTUATIONS FOR WEEK

	New York	New Orleans	Liverpool
Friday, May 30.....	.....	.....	8.59
Saturday, May 31.....	.....	.....	8.59
Monday, June 2.....	16.15	15.33	8.58
Tuesday, June 3.....	16.00	.....	8.54
Wednesday, June 4.....	15.90	15.14	8.43
Thursday, June 5.....	16.00	15.20	8.27

SPOT FLUCTUATIONS AND STOCKS

Markets	May 27	June 4	Sales	Stocks This Week	Stocks Last Year
Galveston....	15.45	15.20	732	220,059	198,642
New Orleans.	15.40	15.14	190	434,508	207,158
Mobile.....	14.75	14.50	45	16,287	21,898
Savannah....	15.20	14.89	6	68,815	12,998
Norfolk.....	15.44	15.13	194	54,468	57,027
New York...	16.20	15.90	.....	210,166	172,612
Augusta.....	14.63	14.56	572	61,720	50,925
Memphis....	14.40	14.20	3,051	220,685	111,868
St. Louis....	15.70	15.85	.....	8,797	15,056
Houston.....	15.35	15.10	2,012	642,764	313,916
Dallas.....	15.30	15.00	2,345	.....	.....

BASIS MIDDLING

	Saturday May 31	Saturday May 24
10 markets average.....	15.10	15.06
Memphis.....	14.55	14.45

PREMIUM STAPLES
First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Nominal
1⅛-in.....	17.25 –17.75c.
1 3/16-in.....	19.00 –19.35c.
1¼-in.....	23.50 –24.00c.

CURRENT SALES

	For Week	Prev. Week	Week Before
Memphis total.....	5,778	5,200	4,763
F.o.b. included in total..	3,921	3,676	3,537
10 markets.....	14,988	17,774	14,086

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts.....	3,375	3,802	2,727
Gross receipts.....	10,036	9,368	7,478
Total since Aug. 1, net..	929,173	850,220	656,990
Shipments.....	21,999	17,420	16,624
Total since Aug. 1.....	1,751,381	1,726,133	1,383,956
Total stock.....	230,831	125,682	145,744
Decrease for week.....	11,963	8,052	9,146
Unsold stock in hands of Memphis factors.....	36,868	6,967	.....
Decrease for week.....	811	430	.....

AVERAGE PRICE APRIL-MAY SHIPMENT
HARD WESTERN COTTON

F. o. b. New England

	Middling	St. Middling
1 1/16 in.....	17½–17¾c.	18 –18½c.
1⅛ in.....	18 –18½c.	18¾–19½c.
1 3/16 in.....	20 –21 c.	21 –22 c
1¼ in.....	24 –25 c.	25½–26½c.

Basis on New York, July, 15.81c.

DIFFERENCES ON AND OFF MIDDLING
WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M. F.....	1.05†	1.00†	1.00†	1.00†	1.00†
S. G. M.....	.90†	.85†	.90†	.88†	.86†
G. M.....	.75†	.75†	.75†	.75†	.72†
S. M.....	.50†	.50†	.50†	.50†	.50†
S. L. M.....	.75*	.65*	.65*	.75*	.71*
L. M.....	1.75*	1.75*	1.50*	2.00*	1.73*
S. G. O.**....	3.00*	2.75*	2.50*	3.25*	2.88*
G. O.....	3.00*	2.75*	2.50*	3.25*	3.93*
YELLOW TINGED					
G. M.....	.50*	.25*	.50*	.50*	.55*
S. M.....	1.00*	.75*	1.00*	1.00*	1.05*
M.**.....	1.75*	1.25*	1.50*	1.50*	1.65*
S. L. M.....	2.50*	1.75*	2.25*	2.25*	2.32*
L. M.**.....	3.50*	2.25*	3.00*	3.00*	3.22*
YELLOW STAINED					
G. M.....	1.50*	1.75*	1.50*	1.50*	1.55*
S. M.**.....	2.25*	2.50*	2.50*	2.50*	2.40*
M.**.....	3.00*	3.00*	3.50*	3.50*	3.20
BLUE STAINED					
M. G.**.....	1.75*	1.50*	1.75*	1.75*	1.70*
S. M.**.....	2.25*	2.25*	2.75*	2.75*	2.45*
M.**.....	3.00*	2.75*	3.75*	3.75*	3.23*

**Grades not deliverable on contract. †On Middling *Off Middling.

EGYPTIAN COTTON

March-April Shipment c.i.f.	Boston	Change
Fully good fair Sak.....	30.45	+0.37
Fully good fair to good uppers.....	22.40	—0.40

(By John Malloch & Co.)

Alexandria Exchange, June 4		
July Sak.....	28.13	.....
June uppers.....	19.80	.....

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA (IN GREASE)

Fine delnc	$0.30 –$0.31	¾ blood	$0.29 –$0.30
Fine clthg	.23 – .24	½ blood	.29 – .30
¼ blood	.29 – .30		

TEXAS AND CALIFORNIA (CLEAN BASIS)

Texas, 12 months	$0.73 –$0.75
California, Northern	.65 – .68

PULLED—EASTERN (CLEAN BASIS)

AA	$0.78 –$0.80	B-Super	$0.58 –$0.63
A-Super	.63 – .68	C-Super	.53 – .55

MONTANA, IDAHO AND WYOMING (CLEAN BASIS)

Staple fine	$0.73 –$0.78
Staple ¾ bld	.68 – .72
Fine and fine medium	.70 – .72
¾ blood	.60 – .63
½ blood	.55 – .58

MOHAIR—DOMESTIC

Best Carding	$0.40 –$0.43
Best combing	.57 – .60

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.28 –$0.30
Cape firsts	.28 – .30

FOREIGN CLOTHING AND COMBING (CLEAN BASIS IN BOND)

Australia:	
70s	$0.65 –$0.70
64s	.53 – .55
58s-60s	.46 – .48

(IN GREASE)

Montevideo:	
58-60s	$0.25 –$0.26
56s	.25 – .26
50s	.23 – .24
Buenos Aires:	
4s, 40-44s	$0.20 –$0.21
5s, 36-40s	.18 – .19

FOREIGN CARPET (GREASE BASIS IN BOND)

Aleppo	$0.33 –$0.34
China: Combing No. 1	.21 – .22
China Filling Fleece	.20 – .21
Szechuen ass't	.21 – .22
Cordova	.18 – .19
Scotch black face	.22 – .23
East India: Kandahar	.28 – .30
Vican'r	.31 – .33
Joria	.31 – .33

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s, 36s	$0.92½–$0.95
2-24s, 40s	1.02½– 1.05
2-26s, 44s	1.10 – 1.12½
2-28s, 46s	1.15 – 1.17½
2-30s, 48s	1.20 – 1.22½
2-32s, 50s	1.25 – 1.27½

(Single yarns 5c. less than above)

2-36s, 58s	$1.35 –$1.40
2-40s, 60s	1.45 – 1.47½
2-40s, 64s	1.47½– 1.50
2-50s, 66s	1.70 – 1.75
2-60s, 70s	2.15 – 2.20

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.95 –$1.00
2-20s, 50s in oil	1.07 – 1.10
2-20s, 56s in oil	1.17½– 1.20
2-20s, 60s in oil	1.32½– 1.35
2-20s, 64s in oil	1.37½– 1.40
1-15s, 46s dyed	1.15 – 1.17½
1-15s, 48s dyed	1.17½– 1.20
1-15s, 50s dyed	1.20 – 1.22½

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.22½–$1.25
1-20s, 60s	1.27½– 1.30
1-26s, 64s	1.30 – 1.32½
1-30s, 60s, Warp	1.45 – 1.47½
1-30s, 64s, Warp	1.50 – 1.52½
2-30s, 64s, Fancy mixes	1.70 – 1.72½
2-40s, 64s, Zephyrs	1.65 – 1.70
1-50s, 66s	1.65 – 1.67½
2-50s, 66s	1.80 – 1.82½
1-60s, 70s	2.07½– 2.10
2-60s, 70s	2.25 – 2.30

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$1.05 –$1.07½
1-40s, 50-50-60s on cops	1.22½– 1.25
1-40s, 50-50-64s on cops	1.25 – 1.27½
1-40s, 50-50-64s Australian cops	1.30 – 1.35

Underwear mixes, 3c. additional.
Solid color, 35c. additional.

◆

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.98 –$1.00
Half-blood (60-62s)	.91 – .93
High ¾ blood (58s)	.83 – .85
Aver. ¾ blood (56s)	.80 – .83
Low ¾ blood	.78 – .80
High ½ blood (50s)	.73 – .75
46s S. A. and N. Z.	.65 – .70
44s S. A and N. Z.	.65 – .68
40s S. A and N. Z.	.63 – .65

TOPS—BRADFORD, ENG. (MAY 30)

Fine (70s)	32½d	¾ bld. (56s)	22½d
Fine (64s)	30d	½ bld. (50s)	18½d
½ bld. (60s)	27½d	Cross-bred (46s)	16d
¾ bld. low (58s)	24d		

NOILS—BOSTON

Fine	$0.57–$0.60	High ½ bld.	$0.44–$0.47
Half-bld	.53– .55	Low noils	.40– .42
Aver. ¾ bld.	.45– .48	Medium colored	.40– .42
Fine colored	.46– .48		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.83 –$0.88
Lap, fine colored	.58 – .63
Hard ends, fine white	.62 – .65
Hard ends, ½ blood white	.45 – .48
Hard ends, fine colored	.30 – .33
Hard ends, medium colored	.23 – .28
Card, fine White	.35 – .38
Burr, fine Carbonizing	.38 – .43

OLD WOOLEN RAGS (GRADED FOR MFRS)

Merinos, Coarse Light	$0.06½–$0.07
Merinos, Fine Dark	.04½– .05
Merinos, Fine Light	.15½– .16½
Serges, Blue	.08½– .09
Serges, Black	.98 – .09
Serges, Red	.11 – .11½
Knit, White	.31 – .32
Knit, Red	.16 – .17
Knit, Light Hoods	.17 – .17½
Worsted, Light	.05½– .06
Worsted, Blue	.09 – .09½
Worsted, Black	.08 – .09

Silk Yarns

THROWN SILK (60 day basis)

Japan organzine, 2 thd. grand XX in skeins	$5.35
Japan organzine, 2 thd. sp. crack in skeins	5.00
Japan crepe, 3 thd. grand XX in bobbins	5.15
Japan crepe, 3 thd. sp. crack on bobbins	5.00
Japan crepe, 4 thd. crack on bobbins	5.00
Canton crepe, 3 & 4 thd. ns. 14/16 on bobbins	2.90
Tussah tram, 2 end on cops	2.00
Hosiery tram, 3 thd. Japan XXX	5.95
Hosiery tram, 4 thd. Japan, selec. gd. XX	5.35
Hosiery tram, sp. crack XX	4.50
Hosiery tram, crack XX	4.40
Hosiery tram, XX	4.30

SPUN SILK YARNS—(Terms: net 30)

40/2	$4.25	60/2	$4.55
50/2	4.35	62/1	3.30

Raw Silk

(60 day basis)
Prices Nominal

Japan filature, grand XX, 13/15	$4.35
Japan filature, sp. crack XX, 13/15	4.15
Japan filature, crack XX, 13/15	4.05
Japan filature, XX, 13/15	3.85
Japan filature, best X, 13/15	3.80
Canton filature, new style, 14/16	1.95
Canton filature, new style 20/22	1.85
Tussah filature, 8 cocoon	1.45
Grand XX (Yellow) 20/22	3.50
Grand XX (White) 20/22	3.55
Sp. crack (Yellow) 20/22	3.40
Sp. crack (White) 20/22	3.50
Crack (Yellow) 20/22	3.40
Crack (White) 20/22	3.45

NATIONAL RAW SILK EXCHANGE

	Close May 27	For the Week High	Low	Close June 3	Net Chge
June	3.80	3.80	3.40	3.44	—.36
July	3.68	3.68	3.33	3.35	—.33
August	3.68	3.68	3.31	3.31	—.37
September	3.66	3.66	3.30	3.33	—.33
October	3.66	3.66	3.30	3.30	—.36
November	3.66	3.66	3.30	3.33	—.33
December	3.66	3.66	3.30	3.31	—.35
January	3.66	3.66	3.30	3.32	—.34

Total contracts, 922. Total number of bales, 9,220.
Total approximate value, $4,222,760.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
50	14	$2.30	$2.00
75	18	1.85	1.65
75	30	1.95	1.75
100	18	1.45	1.35
100	40	1.50	1.40
125	18	1.45	1.25
125	36	1.30	1.20
150	24	1.15	1.10
150	32	1.15	1.10
150	36	1.20	1.15
150	60	1.35	1.30
150	75	1.50	.....
170	24–27	1.15	1.10
170	60	1.35	1.30
200	30	1.05	1.00
200	32	1.10	1.05
200	60	1.30	1.25
300	44	.95	.90
400	72	1.10	.95
450	54	1.00	.95
600	72–96	1.00	.95
900	100–144	1.00	.95

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
35	$3.50	$3.25	125	$1.30	$1.20
50	2.25	1.90	140	1.15	1.10
75	1.85	1.65	150	1.15	1.10
100	1.45	1.35	160	1.15	1.10
			175	1.15	1.05

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	25	$4.15	40	30	$3.15
25	25	3.65	52	30	3.00
30	25	3.40			

(Due to diversified offerings prices for higher denier are not listed.)

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.75	120	$1.90
55	2.55	150	1.60–1.85
75	2.25–2.70	200	1.55
100	2.00–2.45	300	1.50

Rayon Waste

Prices Nominal

Open bleached waste	–$0.22
Open unbleached waste	$0.18 – .20
Bleached thread waste (mfs.)	– .12
Bleached thread waste (misc.)	.11 – .12
Colored thread waste	.08 – .10
Colored clips	– .12

CONVERTED RAYON WASTE

Bleached tops	–$0 52
Unbleached tops	– .44
Bleached noils	– .19
Bleached garnets	– .20
Unbleached garnets	– .18
Colored garnets	– .16

Silk Waste

Kibizzo Kikai Grand XX	$0.85
Kibizzo Kikai Triple Extra	.92
Frison Grand Double	.90
Pierced Cocoons	1.12

Southern Mill Securities

(A. M. Law & Co., Spartanburg)

	Bid	Asked
Abbeville Cotton Mills	..	60
Anderson Cotton Mills	69	73
Arcade Cotton Mills	..	60
Arcadia Mills	235	250
Arcadia Mills, pfd	100	102
Arkwright Mills	..	80
Augusta Factory, Ga	..	20
Avondale Mills, Ala	1100	1150
Beaumont Mfg. Co	290	310
Beaumont Mfg. Co. 7% pfd	99	102
Belton Mills	..	25
Belton Mills, pfd	75	80
Bibb Mfg. Co	103	110
Bibb Mfg. Co. 6% pfd	98	102
Brandon Corp., A	50	55
Brandon Corp., B	..	7
Brandon Corp., pfd	86	91
Calhoun Mills	88	95
Chadwick-Hoskins Co. (par, $25)	10	13
Chesnee Mills	..	75
Chiquola Mfg. Co	250	260
Chiquola Mfg. Co., pfd	91	94
Clifton Mfg. Co	100	110
Clinton Cotton Mills	250	280
Columbus Mfg. Co., Ga	87	95
Cowpens Mills	..	35
D. E. Converse Co	90	97
Dallas Mfg. Co., Ala	..	70
Darlington Mfg. Co	40	51
Drayton Mills	110	..
Dunean Mills	120	125
Dunean Mills, pfd	100	102
Eagle & Phenix Mills, Ga	..	65
Easley Cotton Mills, pfd	45	55
Enterprise Mfg. Co., Ga	..	100
Fairforest Finishing Co., serial notes	98	100
Florence Mills	50	55
Florence Mills, pfd	99	102
Gaffney Mfg. Co	..	35
Gainesville Cotton Mills, Ga	150	160
Glenwood Mills	95	100
Gluck Mills	73	77
Gossett Mills	65	70
Graniteville Mfg. Co	..	100
Greenwood Cotton Mills	400	..
Grendel Mills, pfd. (par, $50)	45	48
Hamrick Mills	..	100
Hartsville Cotton Mills	130	140
Hunter Mfg. & Com. Co., pfd	88	92
Industrial Cotton Mills Co., pfd	..	34
Inman Mills	120	130
Inman Mills, pfd	100	..
Judson Mills, A, pfd	103	106
Judson Mills, B, pfd	100	102
King, John P. Mfg. Co., Ga	80	90
Lancaster Cotton Mills	265	..
Laurens Cotton Mills	..	125
Limestone Cotton Mills	..	100
Lydia Cotton Mills, serial notes	99	101
Marion Mfg. Co., N. C	115	120
Marlboro Mills	..	16
Mills Mill, pfd	95	99
Mollohon Mfg. Co., pfd	98	102
Monarch Mills	115	121
Musgrove Cotton Mills	30	40
Newberry Cotton Mills	111	114
Ninety-Six Mills	400	..
Norris Cotton Mills	..	45
Orr Cotton Mills	..	60
Orr Cotton Mills, pfd	85	90
Pacolet Mfg. Co	..	145
Pacolet Mfg. Co., pfd	100	103
Panola Cotton Mills, Class A, pfd. (par, $60)	58	60
Pickens Cotton Mills	110	115
Piedmont Mfg. Co	105	110
Piedmont Print Works (no par)	15	20
Piedmont Print Works, pfd	60	70
Poe, F. W. Mfg. Co	29	32
Riverside & Dan River Mills	13	15
Riverside & Dan River Mills, 6% pfd	75	80
Saxon Mills	..	75
Sibley Mfg. Co., Ga	50	60
Southern Bleachery	18	20
Southern Bleachery, Pfd	84	88
Southern Bleachery, serial notes	99	101
Southern Franklin Process	22	24
Southern Franklin Process, pfd	97	101
Southern Worsted Corp., pfd	88	92
Spartan Mills	155	..
Spencer Corp., serial notes	99	100
Union-Buffalo Mills	45	51
Union-Buffalo Mills, 1st pfd	91	94
Union-Buffalo Mills, 2nd pfd	48	51
Victor-Monaghan Co	70	74
Victor-Monaghan Co., pfd	112	117
Wallace Mfg. Co	..	105
Ware Shoals Mfg. Co	135	145
Whitney Mfg. Co	..	40
Woodside Cotton Mills Co	..	50
Woodside Cotton Mills Co., pfd	..	45
Yarns Corp. of America, gold bonds	99	101

Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended June 4:

	High	Low	Last Sale	Net Change
Adams Mills	31	30⅞	31	+ ⅛
*American Thread, pfd.	3⅛	3¼	3⅛	+ ⅛
American Woolen	14	14	14	— ⅛
American Woolen, pfd.	38⅛	36⅛	37	....
*Assoc. Rayon, pfd.	50	48½	48½	—1
Belding-Hemingway	4⅞	4½	4⅞	....
Botany Mills, A	3½	3½	3½	....
Cannon Mills	26¾	24½	24½	—2⅛
Collins & Aikman	29½	27½	27⅝	—1½
Consolidated Textile	1¼	1⅛	1⅛	— ⅛
Durham Hosiery, pfd.	51	51	51	+2
*Fabrics Finishing	6¼	3⅞	6¼	+2⅜
Gotham Hosiery	15	11⅛	14½	+1⅛
Industrial Rayon	102	101	101½	—1⅛
Kayser, Julius	29⅜	25⅞	28⅛	+2⅛
Kendall, pfd.	82½	80	80	—2½
Mallinson	11½	10	11¼	+ ⅜
*May Hosiery, pfd.	27	27	27	+1
Mohawk Carpet	22¼	21⅜	21⅜	— ⅞
Munsingwear	48½	48½	48½	+1
Pacific Mills	24	24	24	—1
*Pepperell	99½	96¼	98	+2
Phoenix Hosiery	17⅛	15	16½	—2
*Propper-McCallum	8½	8½	8½	....
Real Silk Hosiery	54	50⅛	51½	— ¼
*Tubize Chat. B	14	12⅞	12⅞	+ ⅛
VanRaalte	16½	16½	16½	—2

*Listed on Curb.

N. Carolina Mill Stocks

(R. S. Dickson & Co., Charlotte, N. C.)

	Bid	Ask
Acme Spinning Co	70	80
American Yarn and Processing Co	..	81
Chadwick-Hoskins Co. (Par. $25)	9	12
Chadwick-Hoskins Co., 8%, Pfd	99	101
China Grove Cotton Mills	102	107
Climax Spinning Co	60	68
Clover Mills	..	27
Converse D. E. Co	90	95
Crescent Spinning Co	58	62
Dixon Mills	92	100
Durham Hosiery, 6%, Pfd	42	50
Eagle Yarn Mills	62	75
Efird Mfg. Co	80	91
Erwin Cotton Mills	..	120
Erwin Cotton Mills Co., 6%, Pfd	92	97
Flint Mfg. Co	..	86
Flint Mfg. Co., 7%, Pfd	..	99
Globe Yarn Mills (N.C.)	..	20
Gray Mfg. Co	..	82
Hanes, P. H. Knitting Co	9	10½
Hanes, P. H. Knitting Co., 7%, Pfd.	96	101
Henrietta Mills, 7%, Pfd	47	55
Imperial Yarn Mills	..	60
Linford Mills	65	76
Locke Cotton Mills Co	..	76
Majestic Mfg. Co	115	135
Mansfield Mills	65	82
Mooresville Cotton Mills	6	10
Mooresville Cotton Mills, 7%, Prior Pfd	..	90
Myers Mills	..	76
Myrtle Mills	..	53
National Yarn Mill	54	65
Perfection Spinning Co	60	70
Ranlo Mfg. Co	..	115
Ranlo Mfg. Co., 7%, Pfd	..	100
Roanoke Mills	65	..
Roanoke Mills, 1st Pfd., 7½%	91	96
Roanoke Mills, 2nd Pfd., 8%	91	97
Rosemary Mfg. Co., Pfd., 7½%	98	..
Rowan Cotton Mills Co	70	80
Seminole Cotton Mills Co	..	76
Sterling Spinning Co	60	78
Stowe Spinning Co	62	77
Victory Yarn Mills Co	39	50
Ware Shoals Mfg. Co., 7%, Pfd	99	101
Winget Yarn Mills Co	40	50
Wiscassett Mills Co	190	210

New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of leading Boston dealers.

	Public Sale	Bid	Asked
Am. Mfg. pfd	68	65	69
Amoskeag	13½	....	....
Arlington	23⅝	23	24
Associated Textile	36½	34	37
Bates	63	80	84
Berkshire Associates, com	17½	17	20
Berkshire Associates, pfd	67¼	65	70
Bigelow-Sanford, com	59	....	....
Boott Mills	120½	115	121
Edwards	80½	80	85
Esmond, pfd	102	100	102
Farr Alpaca	67	72	75
Hamilton Woolen	40	39	42
Hill	18	18	23
Indian Orchard	20½	20	30
Ludlow	136	136	138
Merrimack, com	54	51	....
Nashua, com	32½	32	34
Nashua, pfd	77½	74	76
Naumkeag	88	83	86
Newmarket	25½	24	28
Otis	49½	48	50
Pacific	24	....	....
Pepperell	94	96	99
Plymouth Cordage	82	81	84
York	8⅛	8	10

Textile Calendar

Lowell Textile Institute, Lowell, Mass., Annual Commencement, June 10, 1930.

•

Chattanooga Yarn Men's Golf Tournament, Chattanooga, Tenn., June 12-13, 1930.

•

Texas Textile Association, Semi-Annual Meeting, Hilton Hotel Waco, Texas, June 13-14, 1930.

•

Cotton Manufacturers Association of North Carolina. Annual Convention, Grove Park Inn, Asheville, N. C., June 17-18, 1930.

•

National Knitted Outerwear Association, Annual Meeting, Toronto, Canada, June 19-20, 1930.

•

Philadelphia Wool & Textile Association, Annual Outing, Eddington-on-the-Delaware, near Philadelphia, June 20, 1930.

•

Cotton Manufacturers Association of South Carolina, Annual Meeting, Ocean Forest Hotel, Myrtle Beach, S. C., June 20-21, 1930.

Committee D-13, American Society for Testing Materials, Annual Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 24, 1930.

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Philadelphia Textile Manufacturers' Association, Fourth Annual Outing, Manufacturers' Country Club, Oreland, Pa., June 25, 1930.

•

Manufacturers' Textile Association, Annual Outing, June 26, 1930, at Pomham Club, Riverside, R. I.

•

Southern Textile Association, Annual Meeting, Ocean Forest Hotel, Myrtle Beach, S. C., June 27-28, 1930.

•

Worsted Yarn Spinners' Annual Outing, Manufacturers' Country Club, Oreland, Pa., Sept. 24, 1930.

•

Ninth Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 20-25, 1930.

•

Textile Division, A.S.M.E., National Meeting, Poinsett Hotel Greenville, S. C., Oct. 22, 1930.

•

Southern Textile Association, Semi-Annual Meeting, Poinsett Hotel, Greenville, S. C., Oct. 23, 1930.

Weavers Plan to Pass on Rayon Rebates to Cloth Buyers

At a meeting held June 3 at the offices of The Cotton-Textile Institute, Inc., New York representatives of the Textile Converters Association, Fine Cotton Goods Exchange, Textile Brokers' Association, Association of Cotton Textile Merchants, and The Cotton-Textile Institute, adopted unanimously the following resolution:

RESOLVED: That the representatives of each of the branches of the cotton textile industry attending this meeting recommend for the consideration of their respective memberships that a clause be included in all contracts which call for cloth containing rayon yarns to the effect that any rebates which a mill may receive on any of the rayon used in the manufacture of goods called for in the contract shall be passed on to the buyer in the form of adjusted yardage prices.

It is understood that if favorable action is had from the association a suitable clause will be added to cloth contracts to carry into effect the purpose of the resolution.

Those present included George A. Sloan, president, The Cotton-Textile Institute, who presided; H. F. Lauten, president, Textile Converters Association; Andrew Raeburn, president, Fine Cotton Goods Exchange; Charles Pope, president, Textile Brokers Association; W. E. Stoddard, Berkshire Fine Spinning Associates; John Bennett, Wellington Sears & Co.; George Hussey, S. Slater & Sons; Morgan Butler, Butler Mills; Frank Neild, Neild and Bristol Mills; Edward Berliner, E. Berliner & Co.; Edward Cohen, Arthur Beir & Co.; Sidney Scheuer, Louis Lowinsohn & Co.; Bernard Heineman, Heineman & Seidman; F. A. Colt, merchandising adviser of The Cotton-Textile Institute.

Wool Institute Issues Cooperative Swatch Book

An effective piece of cooperative promotional work was launched this week by the Wool Institute when they issued a book showing a representative group of important women's wear fall and winter fabrics. The book itself is artistically prepared and, except for the samples, carries out a black and gold color scheme. About 24 mills are represented. The samples shown include fabrics suitable for formal and semi-formal wear, as well as sport wear in coatings, suitings and dresses.

The book will be distributed to ready-to-wear buyers in department stores and to a selected list of cutters. Along with the samples is inclosed a tally sheet of the various materials, giving the mill name and fabric number. The buyer can check the items of greatest interest and return to the Wool Institute, who will in turn give the information to the mill. A complete set of samples in that range will then be sent to the prospective customer. It is strictly a consumer proposition and will not be distributed to mills.

A style bulletin by Elisabeth Hallam Bohn of the Institute is sent also. In this letter Miss Bohn says in part:

"The fabrics presented in this brochure are representative of the wide variety of women's wear woolens and worsteds being loomed by the mills of our own country for every possible type of costume. New weaves, new colors are shown, depicting the great developments in styling and construction which have been made in formal, semi-formal and sports wear coatings and suitings, as well as dress fabrics. The fashion dictates of Paris are combined with the new American trend which is required by the personality of the American woman in meeting the conditions peculiar to this country.

"The cloths featured on the different pages illustrate this definite fashion tendency toward suitability. The book will furnish cutters and ready-to-wear buyers of woolen and worsted fabrics, an index for formal, semi-formal and informal wearing apparel."

Program for Meeting of N. C. Mill Men at Asheville

Balanced production and problems of taxation will constitute the main subjects for discussion during the annual convention of the Cotton Manufacturers Association of North Carolina, at Grove Park Inn, Asheville, N. C., June 17-18, according to an announcement from Hunter Marshall, Jr., secretary of that organization.

The opening session, Tuesday morning, will be devoted to the discussion of balanced production, and will include talks by George Sloan, president, The Cotton-Textile Institute; Fred L. Keen, Iselin-Jefferson Co., New York, N. Y.; and John A. Law, president, Saxon Mills, Spartanburg, S. C.

Golf and other entertainment, including a trip through the Vanderbilt mansion, at Biltmore, will be on the program for Tuesday afternoon. The annual banquet will be held in the evening, and on Wednesday morning it is planned to consider the question of state and local taxation. E. S. Parker, Jr., Greensboro, N. C., prominent attorney and a close student of taxation, will deliver the principal address at the morning session.

New Bedford Textile School Alumni to Hold Outing

Members of the New Bedford Textile School Alumni Association will gather for the first annual outing at Mamaroneck, N. Y., June 14. The alumni will be guests of Mr. and Mrs. E. H. Hinckley. Mr. Hinckley, for 10 years an instructor in chemistry at the school, is now associated with the Borne Scrymser Co. of New York. More than 60 members of the association residing in New York have signified their intention of attending the event, planning to leave the city at noon. An old-fashioned bean supper with New England "fixings," served by Mrs. Hinckley, will be a feature of the outing. A. H. Ronne of McCampbell & Co., New York, is secretary. All graduates of the school are welcome and should notify the secretary.

Prejudice Against Reworked Wool

(Continued from page 51)

varying percentages of cloth at times. We find and throw out a percentage that is filled with paint. Some have silk noils or heavy silk striping, odd colors, etc. Serges may contain voiles, worsteds, or delaines, in small percentages. And so on.

Then comes the machining. A large variety of equipment is necessary. It isn't sufficient to install a few rag pickers, a lumper, and perhaps even a carbonizing plant in addition. For instance, in picking, the size, type, and number of teeth in the cylinder, size and type of feed rolls, and also the speed ratios of the various moving parts have to be varied widely according to the needs of the different stocks. These factors have a greater importance than is generally imagined. A substantial part of the entire picking cost may very easily be saved or lost through them.

As an illustration from our records, a little change in the picking of a certain stock made a difference of over 10% in the average strength of the yarn. A combination change in speed ratios and in the preparation of the material itself made a difference of over 35% in the average strength of the yarn, and of about 25% in the tensile strength of the cloth produced therefrom.

The method of oiling makes an enormous difference. Temperatures and methods of carbonizing are very important.

Furthermore, the raw material itself represents usually from 70 to 80% of the entire cost of the shoddy when made by the shoddy manufacturer, which makes it a self-evident fact that a little extra labor cost or manufacturing cost and research are frequently saved many times over by the improvement resulting therefrom in the fiber produced.

Dyehouse Floors

(Continued from page 55)

in one of the patterns suggested for open channels. The floodwater obtains access to the drainpipes by means of standpipes, each of which is the center of slight depression. There is practically no risk of the pipes being damaged; and in order to avoid difficulties in the way of chokes, suitable manholes are provided for the admission of the cleaning rods. This plan has the advantage of reducing the amount of steam that escapes into the atmosphere.

Whichever method may be adopted, it should be the definite job of one person, at the close of each shift, to go around the dyehouse and clear all the baffles of the débris that may have collected. This should never be neglected; it is a sign of inefficiency to have carefully laid drains with the object of clearing the waste away quickly and then to allow them to cease functioning for the want of a little care.

Special Cars for Greenville Textile Show

GREENVILLE, S. C.—The management of Southern Textile Exposition has announced a passenger service for visitors which will be a great convenience to manufacturers in North Carolina and Virginia. Southern Railway Co. has agreed to operate during Exposition Week, Oct. 20 to 25, special Pullman cars from Greensboro. These cars will be placed on the sidetrack in Greensboro. Passengers may occupy their berths from 9 o'clock. Cars will be handled on train No. 29 and parked at Greenville the day following. Passengers may sleep at late as they please, leaving luggage in their sections while visiting the exposition. Returning sleepers will be handled on a train leaving Greenville after 10 p.m., and will be parked the following day at Greensboro.

Passengers from the South will have the same convenience of travel by way of Atlanta. Cars will be open early in the evening and leave Atlanta about midnight. A one and one-half fare rate will be granted for the exposition.

The management of the show stated this week that every space except several small ones in the balcony near the stage, has been engaged.

Skenandoah Rayon Corp. Moves Offices to New York

The trend toward centralization of the rayon industry offices in New York, was further accentuated this week with the announcement that the Skenandoah Rayon Corp., of Utica, N. Y., had moved its executive and sales offices to 2 Park Ave., New York City, which is becoming a headquarters for the rayon industry. Other firms now in the same building are: Tubize-Chatillon Corp., DuPont Rayon Corp., and the Castle Rayon Co., agents for Soie de Chatillon.

Quittner Opens Philadelphia Offices

Egon F. Quittner, formerly with sales organization of S. B. & B. W. Fleisher, Inc., recently appointed vice-president and director of sales of Sheble & Wood, Inc., Salamanca, N. Y., spinners of English spun worsted yarns, has opened offices at 1700 Walnut St., Philadelphia, where he will make his headquarters. Sheble & Wood, Inc., are spinning all counts from roving up to 50s and are giving considerable attention to hand knitting yarns. They also plan, according to Mr. Quittner, to spin single knitting counts that are popular with bathing-suit manufacturers.

Industrial Appoints District Sales Manager for Piedmont

Effective May 15, Bruce Griffin became district sales manager of Industrial Rayon Corp. for the Piedmont district and the adjacent States, with headquarters in Charlotte, N. C. Mr. Griffin has been with the Industrial Rayon Corp. for several years and is entirely familiar with the operations and policies of the company. The work of Mr. Griffin will supplement that of the regular territorial representative, who will continue to call on the trade as in the past.

New England Considers Style Influence on Manufacturing

Business men from the six New England States met in Boston on Thursday, June 5, to discuss the new problem with which the manufacturer is faced as a result of the present growing demand for art and style in all types of manufactured products. The occasion was the first All-New England Art in Industry Conference to be held at the Hotel Copley Plaza. Fourteen experts in the application of style to manufactured goods, spoke at the conference, which was open to all New England business men. It was under auspices of the Industrial Committee of the New England Council and eight co-sponsoring organizations.

The first style show to be held in New England by The Cotton-Textile Institute, Inc., in cooperation with the National Association of Cotton Manufacturers, was a feature of this Conference.

Martin Joins Tubize Chatillon Corp.

E. W. Martin has been placed in charge of the Pennsylvania territory for the Tubize-Chatillon Corp., manufacturers of synthetic yarns, commencing on June 1. Mr. Martin was formerly representative in the same territory of the Nyanza Mills, Woonsocket, R. I.

Mr. Soutar of the Tubize-Chatillon Corp. will continue in the territory as heretofore.

The Pennsylvania representatives will make their headquarters at 1600 Walnut, Street, Philadelphia.

H. E. Bishop Joins Jno. Dunlop's Sons as Asst. to President

It was announced on Thursday that Harold E. Bishop, for some years sales manager of the U. S. Testing Co., Hoboken, N. J., had resigned to become assistant to the president of Jno. Dunlop's Sons, Inc., thrown silks, New York City. Mr. Bishop joined U. S. Testing Co. in 1923.

Kayser Reduces F.-F. Hosiery Prices

Hosiery prices registered their second drop within a few weeks, with the announcement by Julius Kayser & Co., New York, that they had made reductions of from 50c. to $2.50 per doz. on all women's full-fashioned hosiery. The low-luster hosiery numbers are not included in the cut.

Interesting Program for S.T.A. Annual Meeting

An unusually large attendance is expected at the annual meeting of the Southern Textile Association, Ocean Forest Hotel, Myrtle Beach, S. C., June 27-28, according to an announcement from Walter C. Taylor, secretary of the association.

The program for the annual meeting follows:

Friday Morning Session, June 27

10:00 a.m.—Ball Room, Ocean Forest Hotel
Invocation—Rev. C. D. Brearley, pastor, Presbyterian Church, Conway, S. C.
Address of Welcome—Col. H. B. Springs, of Myrtle Beach, S. C.
President's address—L. L. Brown, superintendent, International Shoe Co., Malvern, Ark.
Address—"Cost Figures and the Operating Executive," Sydney P. Munroe, manager cost section, The Cotton-Textile Institute, Inc., New York, N. Y.
Address—"Studies in the Growth and Behavior of Cotton Fibers," Mrs. Wanda K. Farr, Division of Cotton Marketing, Bureau of Agricultural Economics, Washington, D. C.

Friday Afternoon

Golf Tournament—1:00 p.m. Ocean Forest Country Club. Under the direction of Paul F. Haddock, Charlotte, N. C. 18 holes medal play; handicap event.
Prizes will be awarded for: 1st and 2nd low gross; 1st and 2nd low net; and booby.
2:30 p.m. Putting contest for the ladies. Ocean Forest Country Club.
4:30 to 6:00 p.m. Informal tea for ladies. Ocean Forest Country Club.
Fishing, bathing, tennis. Sightseeing bus rides through Myrtle Beach Estates.

Friday Evening

8:00 p.m. Annual Banquet. Main Dining Room, Ocean Forest Hotel. Toastmaster—President L. L. Brown. Introduction of honor guests. Presentation of prizes.
Address—By Hal Kohn, Newberry, S. C.
Dancing at the Myrtle Beach Pavilion. Tickets may be secured from the secretary.

Saturday Morning Session, June 28

10:00 a.m.—Ball Room, Ocean Forest Hotel
Moving Picture—"The Romance of Rayon." Showing complete manufacture of rayon yarns; H. W. Rose, southern sales manager, American Viscose Co., Charlotte, N. C.
Address — "Cooperation on a Practical Basis," Marvin L. Shirley, district manager, Bureau of Foreign and Domestic Commerce, Department of Commerce, Charlotte, N. C.
Business Meeting:
Reports of Divisional Chairman.
Reports of Committees.
Secretary's Report.
Unfinished Business.
New Business.
Election of Officers.
Presentation of Medals.

Canadian Association to Meet Late This Month

TORONTO, ONT. — The Canadian Woolen & Knit Goods Manufacturers' Association has decided to hold its annual meeting late in June, according to reports current in this city.

Business News

Rayon E. & E. Corp. Acquires Plant in Bridgeport

The Rayon Equipment & Engineering Corp., of New York City, this week confirmed the report that the company had acquired the plant of the Bridgeport (Conn.) Engineering Corp., and will manufacture rayon machinery there. The Rayon Equipment & Engineering Corp. was organized under Delaware laws with a capital of $250,000. The firm acts as American agent for C. G. Haubold, A.G., of Chemnitz, Germany, rayon machinery manufacturers. New York office is maintained at 120 Wall St.

Changes in Blaw-Knox Personnel

Blaw-Knox Co., Pittsburgh, Pa., announces the addition to its sales staff of John E. Chiquoine. Mr. Chiquoine was graduated from the University of Pennsylvania, and took part in the World War in the air service. He has been connected successively with the American Chemical Machinery Co., of which he was chief engineer and with the industrial engineering division of E. I. du Pont de Nemours & Co., where he had a considerable amount of experience in experimental and engineering development work.

Mr. Chiquoine will develop an extensive line of welded and other Blaw-Knox process equipment for the chemical and process industries.

The company also announces that W. E. Balliet will succeed P. V. Kelly as manager of their Birmingham office. Joseph Riley will become assistant manager of the district.

Roessler & Hasslacher Outing

The third annual outing of the Roessler & Hasslacher Chemical Co. was held at Narragansett Inn, Lindenhurst, L. I., on Saturday, May 24.

One hundred and sixty employes of the company attended and there was a varied program, including a baseball game between the single and married men, running races and a tug-of-war. Luncheon and dinner were served, and a short address was made by Milton Kutz, executive vice-president in charge of the New York office.

The committee in charge consisted of R. Schmidt, J. F. Schwarz, W. Friesendorf, and Miss R. Zundell.

First Unit of Sylvania Industrial Corp. in Operation

The first unit of the new plant of the Sylvania Industrial Corp. of Fredericksburg, Va., for the manufacture of transparent cellulose wrapping paper was put into operation on May 24. Completion of other units is being rushed and they are expected to be in operation shortly.

Coincidently, prices for transparent cellulose wrapping paper have been reduced approximately ¼c. per thousand sq.in.

Square D Co. and Diamond Electrical Mfg. Co. Merge

The Square D Co., with headquarters in Detroit, and the Diamond Electrical Mfg. Co., with headquarters in Los Angeles, Calif., have combined their interests. Hereafter, the Diamond Electrical Mfg. Co. will operate as a subsidiary of the Square D Co., and the two firms will distribute the Square D, I-C and Diamond E products.

The entire sales structure of the Square D Co. in the West is being merged with that of the Diamond E and all sales of Square D products in the West will be handled by the Diamond E organization. On the other hand, all eastern sales of Diamond E products will be handled through the sales offices of the Square D Co.

Both concerns have specialized in the production of electrical control equipment and by merging the lines a complete coverage of all types of such equipment is made possible.

Under the merger, the Square D Co. will be controlled by the same executive personnel, with the addition of Vernon Brown and J. H. Pengilly of Los Angeles, as vice-presidents.

This is the second merger which the Square D Co. has brought about in a little over a year. The Industrial Controller Co., of Milwaukee, Wis., manufacturer of a complete line of automatic remote motor control equipment, was united with Square D, early in 1929.

Swann Chemical Co. Formed by Merger

Swann Chemical Co., with capital of $1,000,000 and surplus of about $1,300,000, has been formed by the consolidation of seven chemical companies headed by Theodore Swann. The concerns which have been included in the merger are the Southern Manganese Corp., the Southern Manganese Mining Corp., the Southern Manganese Land Co., the Federal Carbide Co., the Federal Fertilizer Co., the Jax Plant Food Co., and the Federal Phosphorus Co. Officers of the newly formed company are Theodore Swann, president; E. L. Sayers, vice-president in charge of operations and engineering; B. G. Klugh, vice-president; John A. Chew, vice-president; Robert S. Weatherly, sales manager; C. M. Jesperson, secretary and treasurer; E. T. Hall, assistant secretary and assistant treasurer; and Alma Lide, assistant secretary and assistant treasurer.

With the exception of the Federal Phosphorus Co., which will be retained as a division for the sale of textile oils and chemicals, phosphoric acid and various phosphates, the names of all the companies involved in the merger will be superseded by Swann Chemical Co.

Chicago Bridge & Iron Works Opens Another Sales Office

The Chicago Bridge & Iron Works has opened a new office in Houston, Tex. in the Electric Building. It will be in charge of J. R. Donaldson, who was formerly in the company's Dallas office.

Bristol Co. Granted Dardelet Threadlock License

The Bristol Co., Waterbury, Conn., manufacturers of safety hollow set screws, has been granted a manufacturing and selling license by the Dardelet Threadlock Corp., under its patents for self-locking screw threads.

Herrick & Voight Move New York Office

Herrick & Voigt, manufacturers of textile oils and printing gums, announce the removal of their office to the Daily News Building, 220 East 42nd St., New York.

Obituary

Charles E. Kaltenbach

Charles E. Kaltenbach dropped dead from heart failure on Tuesday of this week. Mr. Kaltenbach was president of Kaltenbach & Stevens, Allentown, Pa., narrow fabric manufacturers, until January, 1929, when he retired. He had succeeded to this business on the death of his father. Mr. Kaltenbach was 44 years old and had lived in Cranford, N. J., for 14 years. As a boy, he spent considerable time in his father's dye house. Later he invented and developed several processes now used by the textile industry and was one of the first to adapt and perfect silk weighting to the ribbon manufacturing business. He was a director in the Cranford Mutual Building & Loan Association, and a member of the Policemen's and Firemen's Pension Fund. Mr. Kaltenbach had attended the Philadelphia Textile School and was a charter member of Phi Psi fraternity.

John Garsed Campbell

John G. Campbell, secretary and treasurer of the Joynes-Campbell Co., Philadelphia, died May 28, at the age of 78 years, following illness of two weeks. He had been associated with the textile industry for many years in various capacities, being the son of James Campbell, a pioneer textile manufacturer of Chester, Pa., who is credited with bringing the first modern French napping machinery to this country. It was installed in the plant of the Industrial Dyeing & Finishing Co., also known as the Campleton Mills, in which Mr. Campbell held a large interest. In 1911 he helped form the Joynes-Campbell Co., in which he was active until a short time before his death.

W. L. Gassaway

W. L. Gassaway, until recently president of Issaqueena Mills, Central, S. C., and The Courtenay Mfg. Co., Newry, S. C., died June 4 at his home in Greenville, S. C. Physicians stated that his death was due to overexertion in connection with supervising some work in his home. Mr. Gassaway was 65 years of age and had been identified with the business and civic life of Greenville for many years.

C. A. Moore

C. A. Moore, secretary and treasurer of the Golden Mfg. Co., Durham, N. C., died June 2 as a result of injuries received two weeks previous in an automobile accident, in which his wife was killed. Mr. Moore had been at the hospital since the accident and little hope was entertained at any time of his recovery. He was 52 years old. He had been with the Golden Belt company for a number of years.

William Oberreit

William Oberreit, superintendent of the worsted yarn department of the Forstmann & Huffmann Co., Passaic, N. J., died recently. Mr. Oberreit was 45 years old and had been with the company since its inception in 1909. He came to this country from Germany as an engineer. Death vising some work in his home. Mr. Gaswas caused by an operation for mastoiditis which developed into spinal meningitis.